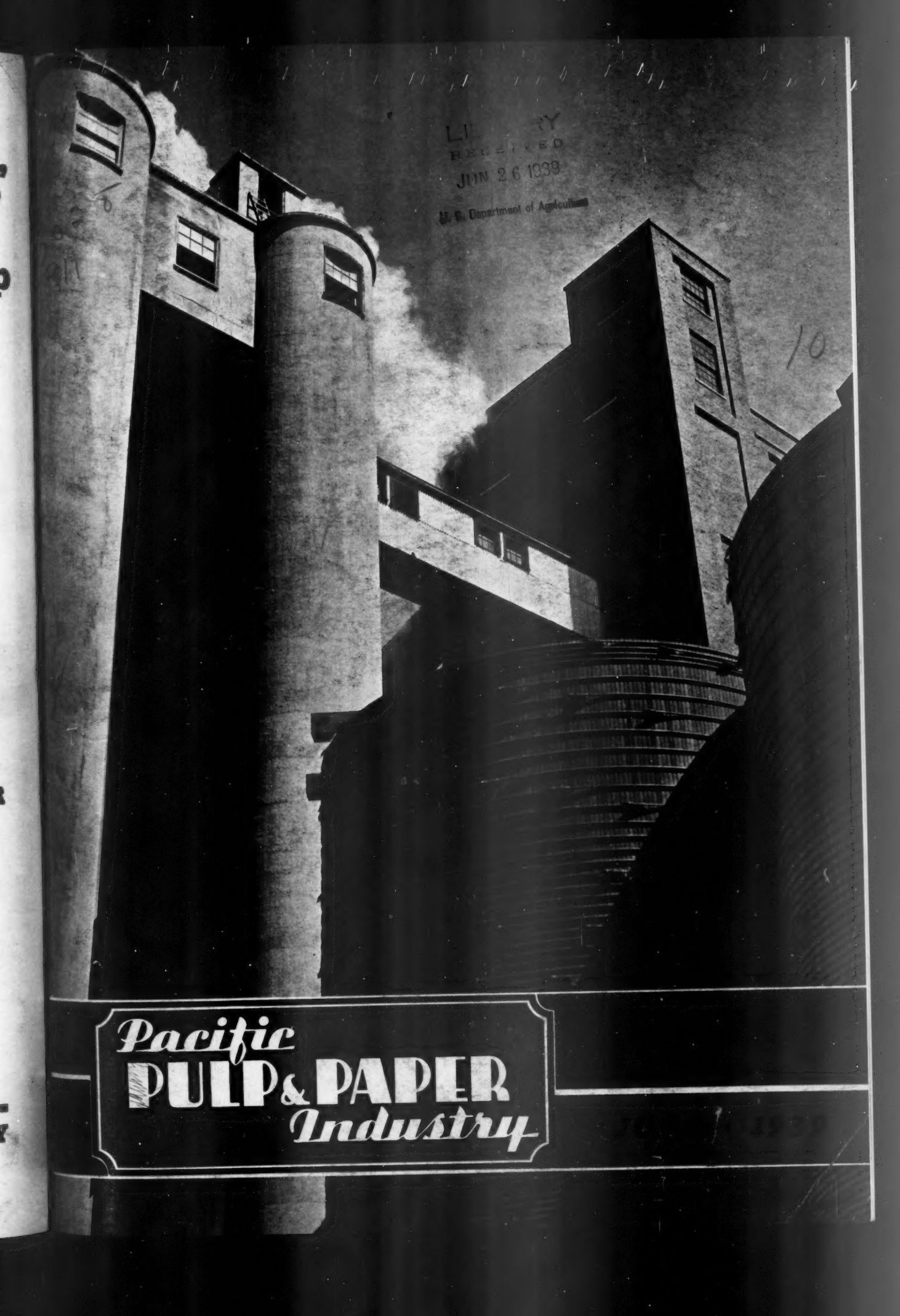

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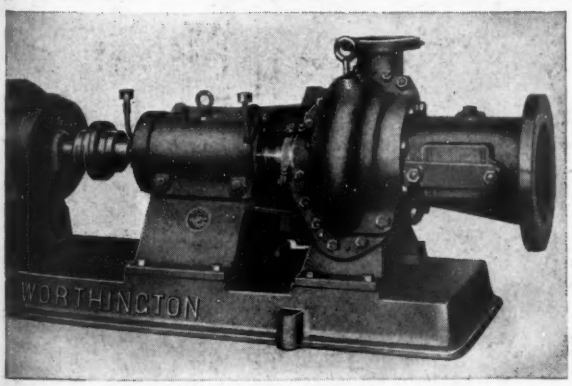

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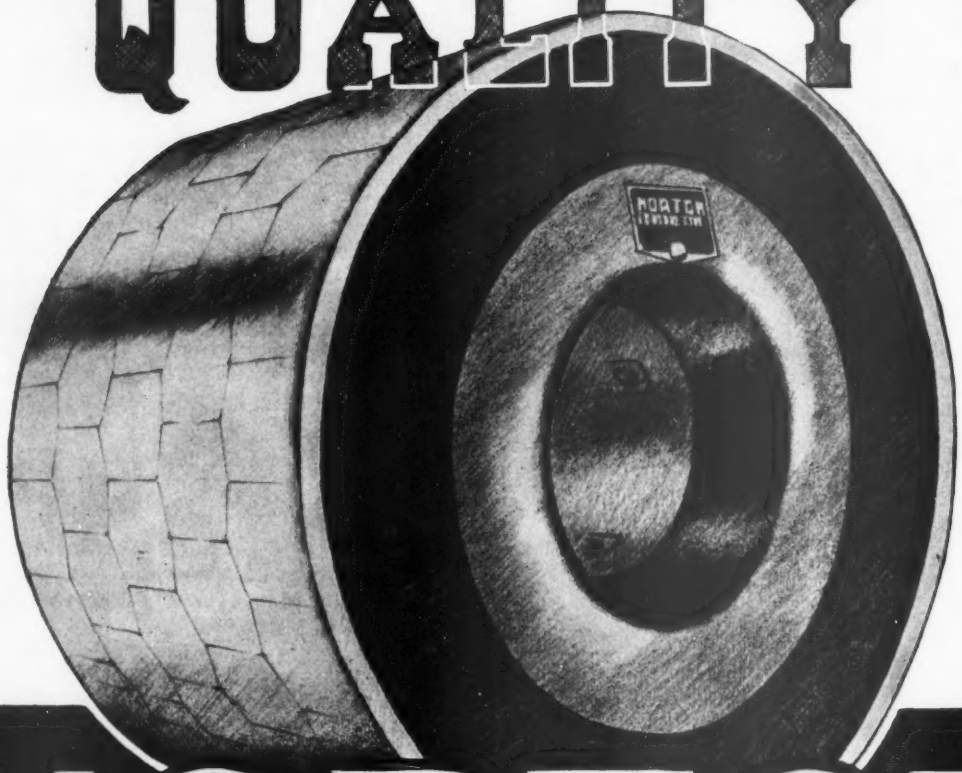

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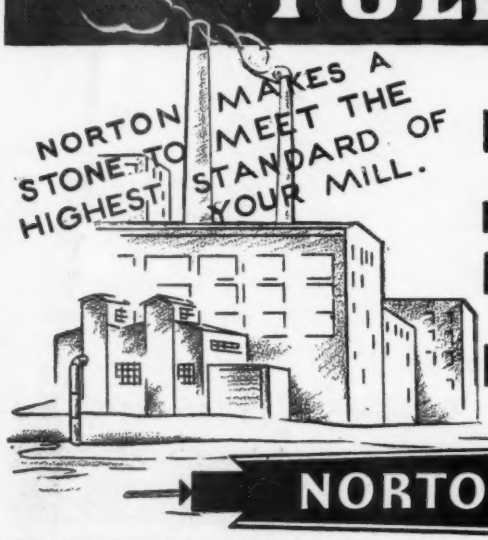

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The Journal of the Pacific Coast Industry

JUNE • 1939

Vol. 13 – No. 6

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SUBSCRIPTION RATES

United States and Canada	$4.00
Other Countries	$5.00
Single Copies	$ .35
Review Number	$1.00

Newsprint Prices Under Fire

Department of Justice picks Pacific Coast as scene for first grand jury investigation of alleged monopolistic practices which is to start June 22nd ... "The Department of Justice has neither the power nor the desire to regulate any kind of business activity," states Thurman Arnold, Assistant Attorney General in charge of anti-trust proceedings.

● The following news story on the Department of Justice's investigation of alleged monopolistic practices in the newsprint industry appeared in Editor & Publisher for May 23rd. It is reproduced in full for it gives the most complete statement of the aims of the investigation that has yet appeared. Quoting:

"Grand jury proceedings on the West Coast and a general investigation elsewhere in the United States were announced today by the Department of Justice in an attempt to determine whether price fixing exists in the newsprint business.

"The probe of monopolistic practice will proceed without reference to the "consent decree" of 1917 under which producers and marketers of newsprint were perpetually enjoined from acting in concert to maintain prices. Relatively few of the parties to that suit are in business now and the ratio of domestic production to domestic sales has changed to an extent which makes an entire new study desirable, it was explained.

Coast Producers Heard First

"Subpenaes already have been issued requiring the attendance of witnesses before a federal grand jury in the Northern District of California at San Francisco. This proceeding is limited to activities of producers and distributors in the Pacific Coast area. The probe will start June 22.

"The investigation of newsprint trade practices in other parts of the country likewise was gotten under way quietly, Thurman Arnold, Assistant Attorney General in charge of anti-trust proceedings disclosed today.

"For many years, complaints have been made both to the Department of Justice and to the Federal Trade Commission that the mandate of the 1917 decree was being ignored. More than one year ago, John H. Perry launched a persistent campaign to bring about inquiry, lodging his complaint first with the trade body and next with the Department of Justice. Eventually, the Justice Department agreed to act. The Federal Trade Commission co-operated in a fact-finding study which was turned over to the Attorney General, January 7.

"The Commission found only two of the eight individual and only 14 of the 45 corporate defendants in the 1917 case are now members of the industry. It also found that at the time the decree was obtained, the United States produced three-fourths of its newsprint requirements while it now produces only one-fourth and imports the remainder, 80 per cent of which comes from Canada. The 1917 decree, it was therefore concluded, is an ineffective means of preventing the restraints at which it was directed.

Price Zoning System Used

"Canadian and domestic manufacturers for the most part follow certain uniform practices, described by the Department as proper subjects for study in the light of the anti-trust laws. Pacific Coast industry members do not only conform to these practices but also engage in other activities which appear to federal lawyers, they say as violative of the Sherman Act. Separate action with respect to each of these situations was considered abvisable.

"Discussing the reasons prompting the Department to institute the two proceedings, Mr. Arnold explained that both domestic and imported newsprint is sold pursuant to a price zoning system, uniform in each of 10 zones into which the country has been divided. Recent advances, he said, have been generally uniform among all manufacturers. Continuing, he said: 'In 1936 all manufacturers increased the base price of newsprint from $41 to $42 a ton. In 1937 they increased this price to $43.50 a ton. In 1938 most manufacturers increased the base price to $51 a ton, while a few manufacturers in the eastern area limited this advance to $49.

"(Editorial Note: Mr. Arnold here misquoted newsprint prices and increases. The 1935 price was $40 a ton, going to $41 in 1936. In 1937 it went to $42.50 and in 1938 went to $50 for Canadian and $48 for domestic paper.)

"'There is a striking uniformity throughout the whole industry in respect to quantity differentials and other trade practices which determine the prices of varying types and quantities of newsprint.'

"The commodity, Mr. Arnold points out, is the largest single item of material cost in the publication of a newspaper, 1938 consumption totaling 2,000,000 tons with a value of more than $100,000,000. The advance of more than 20 per cent in price over the past three years has added approximately $20,000,000 to the 1938 cost to publishers, affected advertisers and subscribers by making necessary an increase in the cost of service to each group, the federal "trust-buster" commented.

Smaller Papers Hard Hit

"Smaller newspapers were especially hard hit, he found, for these reasons: they buy in the open market, paying about 10 per cent above contract prices; they buy less than carload lots and the price increases progressively as the size of the purchase diminishes; many buy sheets rather than rolls and pay a premium therefor. Thus, he concluded, the 1938 advance of $7.50 a ton meant an increase of "several times this amount" to the small publisher.

"The Federal Trade Commission study

disclosed evidence that action by Canadian manufacturers restrains free competition in the United States newsprint market, and that there is some degree of co-operation to that end by American producers and distributors, Mr. Arnold disclosed by way of leading into this discussion:

● "'Should this investigation show that members of the newsprint industry are maintaining prices in the domestic market by concerted action which violates the Sherman Act, the Department will of course be called upon to begin legal proceedings. If price uniformity is found to result from violation of the antitrust laws, action by the Department should result in the restoration of competition. Should it finally appear that this uniformity of prices and trade practices results from conditions beyond the jurisdiction of the Department, the facts secured will be submitted to Congress so that it may consider whether legislation is necessary to insure United States publishers adequate supplies of newsprint at reasonable prices.'

"Decision to begin grand jury proceedings on the West Coast without the preliminary of further investigation resulted from a finding by the Federal Trade Commission that restraints have been established in that area, in violation of the Sherman Act.

Must Enforce the Law

"'The Department has neither the power nor the desire to regulate any kind of business activity,' Mr. Arnold assured. 'In enforcing the federal antitrust laws its single duty is to free the channels of interstate commerce from regulation by private combinations in restraint of trade. It must take action when evidence is brought to its attention which indicates that the statutory policy of free compeition is being thwarted by private agreement. If it is finally established that agreements in restraint of trade at present govern business in newsprint throughout the Pacific Coast area, criminal proceedings should result in the establishment of free competition. As a consequence, prices and trade practices will be determined by the unhampered interaction of economic forces and lower prices may be reasonably expected. Newspaper publishers in that region will be given access to a free newsprint market.'"

Death Takes W. A. Bolger, Veteran Paper Maker

● William J. Bolger, 73, old time paper maker and boss machine tender at the Camas mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, died in Portland on May 31st.

Funeral services were held in Camas on June 2nd. Mr. Bolger had been connected with the paper industry for 48 years, a large part of the time with the International Paper Company. Prior to moving to Camas in 1921 he traveled over much of Europe and North America in connection with paper machine installations.

Mr. Bolger is survived by his widow, two sons and three sisters.

Pacific Straw Will Soon Reorganize

● The Pacific Straw Paper and Board Co. of Longview, Wn., plans to reorganize soon on a new basis. Details have not as yet been divulged, but it is understood that the company will be on a more solid foundation after the reorganization has been effected.

The plant is now running at full capacity and they have plenty of orders to continue for the present. Arthur Zimmerman, vice president and general manager, says that the outlook is favorable, and that he expects that the mill will be able to operate indefinitely with a full crew and at full capacity. Financial arrangements are being worked out to continue on this scale.

Since last March the financial position of the company has been materially improved and considerable savings have been effected in operation and management.

It is not anticipated that the reorganization will make any material change in the management, or will affect the service to customers of the company.

Hawley Makes a Number of Improvements

● The Hawley Pulp & Paper Company recently completed several improvements which have increased production and efficiency.

A Voith inlet was installed on No. 1 paper machine, which started up very satisfactorily, according to vice president and mill manager Carl E. Braun. The new equipment is expected to improve the quality of paper produced, as well as to increase production speed and to cut operating costs.

Considerable of the old piping was removed, and stainless steel and wood piping installed, so that the higher grades of paper may be manufactured on No. 1 machine. New beater chests, and paper machine stock chests were also put in.

On No. 2 paper machine a new Beloit suction press was installed and put into operation with only a very few minor adjustments. This equipment has already speeded up the machine more than 50 feet per minute, and is helping to make a much more uniform grade of paper.

The installation of the new suction press more than doubles the clothing life on the machine.

On No. 2, new beater and stock chests were also put in, and some of the old piping was replaced with stainless steel and wood, in order to make finer grades of paper.

Spaulding Running At Half Capacity

● The Spaulding Pulp & Paper Company of Newberg, Oregon, is now working on an operating schedule of about 50 per cent capacity, running three or four days a week. This schedule will be continued indefinitely, until the market permits a change. Prior to adopting this schedule, the mill was running at about the same production, but operating full time in alternate months.

Pacific Roofing Starts Production in June

● The new Portland, Oregon, factory of the Pacific Roofing Co. started operating early in June, turning out the full line of products. It was expected that the plant would be producing at full capacity within 30 days.

The company's building has been constructed on N. W. Front St., at Balboa. A. E. Otis is president, Thomas C. Young, vice president and general manager, and H. H. Wade is secretary and treasurer. Charles Humble is plant superintendent.

They manufacture a full line of roofings, including shingles, roll roofings, felts and building papers, roof coating and asphalt.

Fry Roofing Buildings To Be Finished End of June

● The $200,000 factory for the Lloyd A. Fry Roofing Co., which is being built at N. W. Yeon and Thirty-fifth avenues in Portland, is scheduled for completion June 20 or 25. Installation of machinery will start after that time, when Mr. Fry, whose headquarters are in Chicago, is expected to visit the plant.

Vernon Enlarging Finishing Room

● The Fibreboard Products, Inc., Vernon Division, according to Bruce F. Brown, general manager, is making an addition to its finishing room with the demolition of a series of old garages and the building in the area this provided of an extension to the present finishing room giving an additional 8,640 square feet of space for this department. This will give more room for handling the peak loads of night runs and holiday runs.

Paper Production at 81.3% Average for First 22 Weeks

● The American Paper & Pulp Association's weekly report of the ratio of production to paper mill capacity shows an average for the first 22 weeks of 1939 of 81.3 per cent. This compares favorably with the 67.7 per cent for the same period in 1938. In 1937 the average for the first 22 weeks was 90.4 per cent, 9.1 per cent better than for the current year. In 1926 the percentage was 78.9 and in 1935 69.0 per cent.

Of the first five months of 1939 January was the low month with 77.5 per cent, while March was high with 84.1 per cent. May dropped down to 80.1 per cent.

Production during the week ending June 3rd was 70.9 per cent as compared with 62.5 per cent for the corresponding week a year ago.

Paperboard operating ratios for the first five months of the current year show improvement over the 1938 months maintained. January of this year was 60 per cent against 54 per cent in 1938; February was 67 per cent compared with 60 per cent in 1938; March, 1939, was 71 per cent against 61 per cent in 1938; April 69 per cent against 57 per cent and May 66 per cent against 58 per cent. For the week ending June 3rd the paperboard operating ratio was 57 per cent.

Factors Affecting Paper Machine Felt Life

by V. L. TIPKA*

THE primary purpose of determining the residual strength properties of felts removed from paper machines, and the interpretation of the results obtained, is intended to be both a benefit and a guide to the paper machine crews and paper mill supervision in effecting remedial measures to prolong the life and running time of future felts to be put on the paper machine. Any possible saving that can be made by increasing the life of felts is immediately reflected in lower conversion costs. Test results obtained from tensile strength determinations, will within reason, indicate the causes of both short and long felt life.

In most cases, felts are removed due to either or both mechanical or chemical damage. This damage may affect the whole felt or it may be only localized; being more apparent on the edges or directly on the center. Whatever the cause or wherever the location of the damage, the felt is usually removed due to the particular damage itself. A worn thread-bare center in a felt will necessitate removal even though the edges may still retain considerable nap and water removal ability. By such tests that will be described I hope to indicate a method whereby localized wear might be determined and a longer and more efficient felt life realized.

Tensile Strength Testing Procedure

There are several types of tensile strength testers available to determine the residual strength properties of worn felts. Either the motor driven, the hand operated, or the hydraulic piston pendulum type tester may be used. The former type tester is in common use for most textile materials and is manufactured by the Henry L. Scott Company, Providence, R. I.

The test sample of worn felt, sampled and cut into strips as shown in Figure 1, is strained by a uniform movement of a pulling jaw to which one end of the sample strip is attached; the other end of the sample is held by a jaw fastened to a pendulum. In testing, the pendulum is displaced from its normal vertical position by a direct pull on the sample strip, and the amount of displacement indicates the load or residual tensile strength of the sample. The pendulum on the Scott tester is ratcheted to a notched sector so that after the sample breaks the pendulum will remain stationary at the maximum load. From the chart or dial on the instrument the breaking strength in pounds per inch of width is obtained when using a strip one inch wide. In cutting the samples from the worn felt, special precautions should be taken to see that the strips represent the full inch of width and that the threads of either the warp or filling are fully twelve inches long. Erroneous results occur when samples are not properly obtained. Correct sampling might be obtained by placing a steel template parallel with the threads to be tested and observing that full length threads are lying in parallel before cutting the sample. During the testing it is well to observe certain characteristics of the sample being tested. Finer felts usually stretch considerably before rupturing while coarser first felts snap abruptly at the break. Greater accuracy might be obtained in using two-inch strips of twelve inches in length in special jaws provided for the Scott tester. However, all of the work I have done has been with either one inch or 0.59 inch samples.

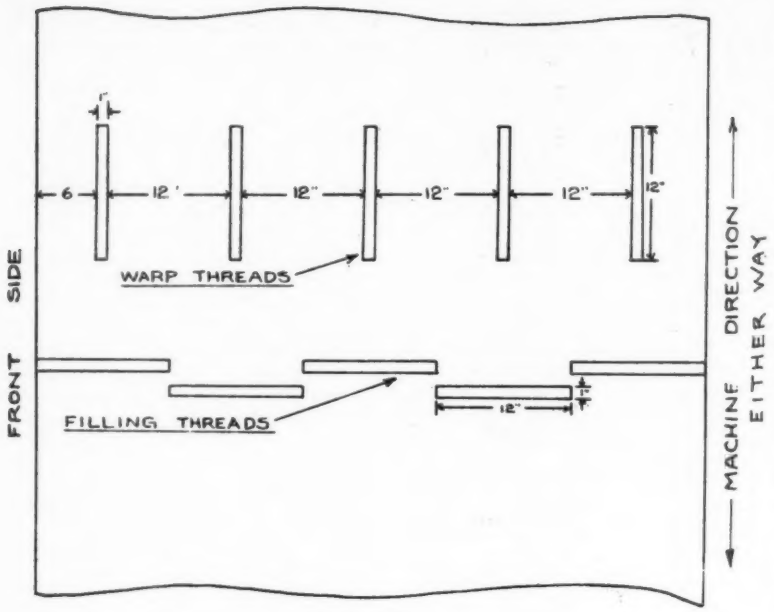
After both warp and filling samples have been tested, the numerical results may be plotted on either semi-logarithmic or regular plain graph paper. The usual method of plotting the results is to indicate the tensile strength determinations as ordinates and the width of the felt in inches as the abscissa.

After the results are plotted, it is necessary to interpret the tests in the light of one's personal observations and testing experience. This entails a detailed account of the reasons or causes of any irregular and excessive wear occurring in the felt. Analyzing the cause goes further and beyond the plotted graph; it requires a knowledge of both the felt's running characteristics and the section from which it was removed. A detailed inspection of the press, felt rolls, bearings, and suction boxes is usually necessary, in conjuction with the tests, to correctly determine the exact cause of excessive wear. The test results as indicated in Figure 2 would normally indicate excessive crown in the press rolls. However, in these two particular felts, calculation of the roll deflections and the amount of weight carried on the lever arms did not indicate too much crown for the speed at which the machine was operated. Further examination after removal of the second felt revealed the source of the trouble to be a V-shaped slotted suction box which when removed and replaced with an ordinary drilled hole cover, increased the life of the third felt put on the machine to 42 days and on the fourth felt to 49 days. I have a sample here today of the felt shown in Figure 2, which was removed November 14th. You can examine this felt on the edges and see how strong and firm it is; in the center it is practically thread-bare.

Referring to the two felts represented in Figure 2, you will note an increase in strength in the filling which is in excess of that of a new felt. This increase of strength usually occurs on second and third press felts and is due to a shrinking and fulling action after the felt had been washed and operated. This particular felt marked the sheet in the center and had its water removal efficiency reduced on the edges; the latter due to the fulling action. It is for this reason, that of shrinking and fulling, that too long a felt life should not be expected, or in other words avoided, since lower felt costs obtained with closed-up felts will then only mean increased steam usage in the dryers.

The tests from two bottom wet felts are indicated in Figure 3. The first felt removed on March 3rd gave a fairly even distribution of wear from the front edge to beyond the center. From the center to the rear edge the tests indicated a gradual wear increasing in severity toward the rear side. The second felt removed showed the same wear with

*Research Engineer, Hawley Pulp & Paper Company, Oregon City, Oregon. Presented at the Joint Meeting of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association and the Pacific Section of TAPPI, Tacoma, Washington, June 3, 1939.



METHOD OF CUTTING SAMPLES FROM FELT

FIGURE 1

four days shorter felt life. Observations during the running life of both felts indicated several factors which might have caused this wear. The seam ran ahead on the rear side; 50% per cent more weight was carried on the compound lever arm; the felt scraped the saveall pan under the suction press; and, measurement of the section revealed rolls to be out of line. All of these conditions were corrected; effecting thereafter a 19-day felt life.

Perhaps the greatest fault one might acquire in surveying felt operating conditions is that of forming conclusions too quickly regarding the cause or causes of excessive wear. It has been my good fortune to work with congenial supervision in the paper mills, and the close cooperation and guidance from them has been very helpful and fruitful of results. I would like to mention that this testing of worn felts is not in itself an absolute means of prolonging felt life, but with the tests and a knowledge of the paper maker's problems, improved felt life might be anticipated.

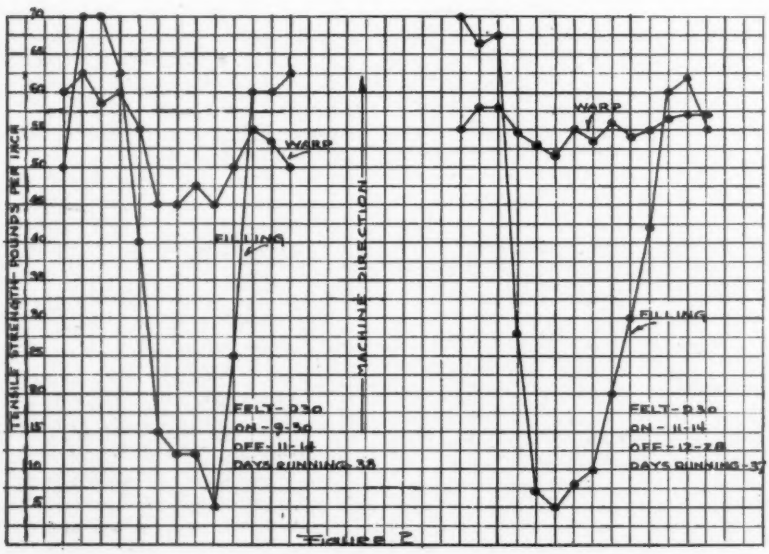


FIGURE 2

Mechanical Damage

As mentioned before, when a felt shows excessive wear in the center, it is normally surmised that the press rolls are carrying too much crown. While this is true in some cases, my own experience indicates this is not always so; particularly on high speed paper machines. Suppose for example we have a 238 inch press roll carrying 32,000 lbs., total weight, with an inside core diameter of 18.5 inches; an outside core diameter of 26.5 inches; and an overall diameter (0.75 inch covering) of 28 inches.

Using an accepted formula for a deflected beam which is supported at each end and uniformly loaded throughout its entire length, we have:

$$D = \frac{5\ WI^3}{384\ EI}$$

The total deflection in inches due to the total weight and pressure in pounds is represented by D. The total weight in pounds including the roll itself is represented by W. The face of the roll or the distance between the journal supports being 1, and E and I representing the Modulus of Elasticity and the Moment of Inertia respectively.

For a hollow press roll having a circular cross section with a core, the Moment of Inertia is expressed as:

$$I = \frac{3.1416\ (D^4 - d^4)}{64}$$

Where D represents the outside and d the inside diameters, the Moment of Inertia of the above roll would be:

$$I = \frac{3.1416\ (493155 - 117135)}{64}$$

$$= 18457.9 \text{ inches.}$$

The Modulus of Elasticity is assumed to be 13,500,000 and since this value occurs in the denominator of the equation, the smaller it is assumed to be the greater will be the deflection of the roll.

Knowing the total weight, the face, the Modulus of Elasticity assumed, and the Moment of Inertia calculated, we may now derive a value for D, the deflection:

$$D = \frac{5\ WI^3}{384\ EI}$$

$$D = \frac{5 \times 32{,}000 \times 13{,}481{,}272}{384 \times 13{,}500{,}000 \times 18458}$$

$$D = .0225 \text{ inch}$$

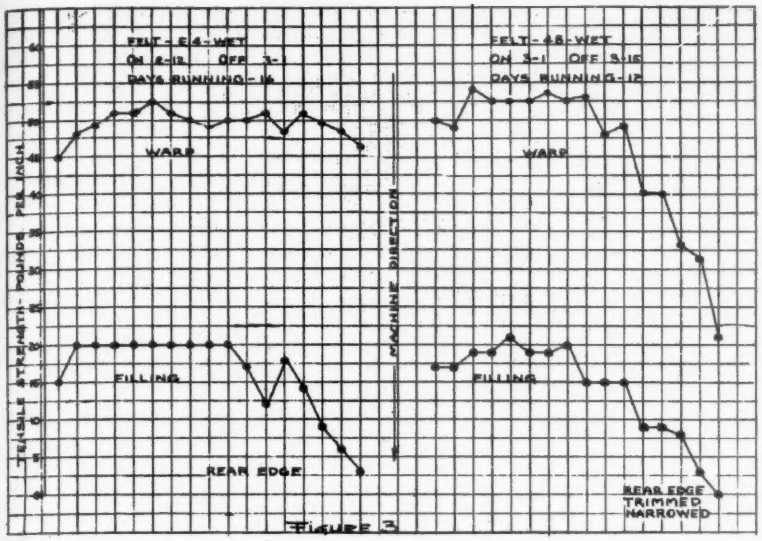


FIGURE 3

Therefore, the calculated deflection in the above roll is 0.0225 inch and since this value must be doubled to obtain the crown, it therefore develops a crown of 0.045 inch is necessary to compensate for the deflection in this roll. Incidently, this is also the crown recommended by the manufacturer of this roll.

When this roll was crowned to 0.045 inch the web entering the dryers showed a wet streak in the center and tests indicated the moisture to be from two to three per cent less on the edges. This roll would stand 50% more crown, dry the web more evenly, and at the same time not affect felt life to any serious extent.

● High speed machines, especially those operating above 1000 feet per minute, require more crowning than is ordinarily thought of to compensate not only for the deflection in the roll but for the whipping action while the roll is being revolved. The severity of this latter condition is dependent upon the roll diameter and the revolutions per minute at which it is operated.

● Suction boxes on felts create as much mechanical damage as any other single factor. Figure 4 indicates blow-marks in the casting on the top of a metal suction box cover which were sharp enough, when the felt was under vacuum, to reduce the life 50 per cent. Replacement of the metal strips with temporary maple strips restored felt life to its average. The markings which show in this photograph were so small, the severity of their effect on felt life was questioned for several months. They could not be felt with the fingers but they certainly damaged the felts as soon as vacuum was applied.

In order to reduce the frictional wear on felts, some mills have installed felt conditioners which function to keep the felt open and clean throughout its life. They also reduce the amount of harmful washing under which felts are so often subjected. In cases where felt conditioners are thought not applicable, certain advantages might be obtained with the Swedish type suction box; some details of which are shown in Figure 5. These rolls materially reduce the normal suction box damage and have been known to increase felt life over 50 per cent. Good or bad results with the Swedish type box will depend on its construction. Boxes made of light material and not properly supported will not stand-up under heavy vacuum; either the box or the roll will bow in the center. A device as simple as this to fabricate and one with the possibility of materially increasing felt life should be worthy of the best of materials.

FIGURE 4

● Figure 6 indicates press roll weight arrangement with compounded leverage. For the proper functioning of both levers and weights, the levers should be inspected from time to time to prevent their tendency to lock or freeze in place. It is my belief the machine tenders should be given both the formulation and a completely worked-out table which would indicate to them the exact amount of pressure exerted with various weights at different positions on the lever arms.

● While not normally considered serious, the application of shower water is another source of damage that might be avoided or reduced with spray type nozzles. I have examined some felts which were literally cut into shreads by a high pressure drilled-hole shower pipe. High pressure spray nozzles not only use less water but clean the entire width of the felt more effectively.

Other sources of mechanical damage might be located in small diameter rolls, friction bearings, burned-out anti-friction bearings, scored roll facings, and the temporary use of heavy string around felt rolls.

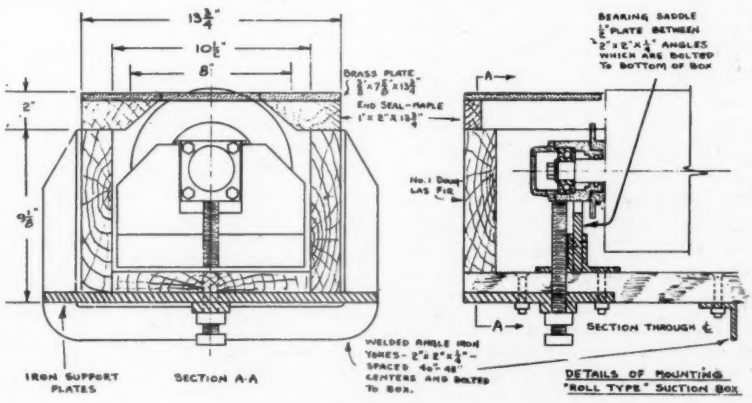


FIGURE 5

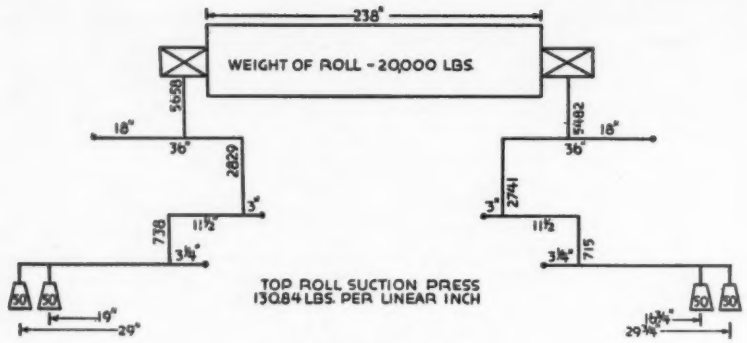


FIGURE 6

Chemical Damage

The Albany Felt Company in 1932 published a very interesting and enlightening booklet on "Paper Machine Felts." This was my first source of information indicating both graphically and numerically the effect and severity of both the temperature and alkalinity of felt washing solutions on tensile strength and stretch properties of woolen felts. Since the washing temperatures usually employed in the mill were generally beyond the range shown in this booklet, a series of similar tests were made using a regular mill washing solution containing a weighed amount of soda ash and synthetic detergent in water. Strips of new woolen paper machine felt were used in the experiment. Figure 7 is self explanatory of the results obtained which correlates generally that indicated by the Albany Felt Company. The action of alkali in the felt washing solution is actually one of chemical nature, and, it is a well known fact chemical reactions double their force with every 10° C., rise in temperature.

● Wool is generally quite resistant to acid. However, being of protein nature it is soluble to a certain extent in dilute alkalies. The chemical composition of wool is approximately 50% carbon, 25% oxygen, 16% nitrogen, 7% hydrogen, and, 3% sulphur. This analysis of wool is nearly the same as that of human hair, and, according to Nessler, the inventor of permanent waving, alkalies are very destructive to human hair. When strong alkalines are used in the woolen felt washing solution, especially so at higher temperatures, a very destructive breaking down of the fiber characteristics occurs. If it does not actually dissolve and weaken the woolen fiber, it will tend to shrink and tighten the felt; making it harsher and more brittle. These qualities are not desired on the paper machine. Reference, however, has often been made that the felt manufacturer often uses an alkali in their fulling process to shrink the felt to its desired size. It is true that an alkaline detergent is often used in fulling, but it must be remembered too that the felt maker is doing just what the paper maker should not do. Fulling a felt is a process of both shrinking and felting in which the felt is shrunk about 50% in its width and approximately 10% in its length. When this has been accomplished under controlled conditions, the felt should fit the paper machine section for which it was made and further shrinking with any other destructive alkaline agent only tends to tighten it and destroy both the water-removal and the elasticity of the felt. In washing a felt in alkaline solutions, it is therefore well to remember that both warp and filling threads are being weakened and the greatest damage is probably occurring in the nap, from which we desire both finish and resiliency throughout the life of the felt.

In another experiment, I tried to determine the affects of temperature alone on woolen felt characteristics. This was done by varying the temperature of a water bath from 60 to 180° F., and subjecting strips (1"x12") of felt in the bath for exactly five minutes. These strips, upon drying, did not show strength loss but it was obvious their physical characteristics had changed slightly. Furthermore, it was noted the strips (new woolen felt) did not wet-out readily and required continuous agitation to keep them under the surface of the water.

The purpose of washing felts is primarily to remove the dirt which consists of grease, pitch, sizing, silt, mineral particles, fillers, and pulp fiber particles. This dirt is entangled in the nap of the felt and some is well beaten into the felt body fibers by the continual action of working through the press rolls and around the felt rolls and over suction boxes. The condition of the felt is readily indicated since it ceases to act as a good drying medium. Any treatment then that eliminates the dirt and restores to the felt its original nap and drying capacity is desirable when the felt is filled with dirt.

● The removal of dirt particles from the felt is dependent upon the temperature of the washing solution, the detergent concentration, the surface and inter-facial tension, the friction and mechanical action, the emulsification of dirt particles with the detergent, and proper rinsing.

The temperature is important in relation to the type of detergent employed and since we know that higher temperatures affect woolen fiber adversely, the lower the temperature used the better. The concentration of the detergent used is entirely dependent upon the type of dirt and condition of the felt. This will vary from mill to mill and may be governed by its foaming and emulsification ability. The surface and inter-facial tension controls the rate of penetration of the detergents into the felt or its wetting-out ability and also affects the rinsing properties of the detergent. Friction and mechanical action is necessary to loosen the dirt particles so that they might be "floated-out" from beneath the nap and inter-splices of the felt fiber. Emulsification is the process of making foam and producing a more or less stable form of suds which is strong enough to hold the dirt particles and fulfill the three phases necessary for flotation. When the mechanical action has loosened the dirt and the dirt particles are suspended in a strong suds or emulsion, rinse water will wash the felt clean and leave the nap raised and the felt fluffy. A weak emulsion should be avoided since its rapid break down may re-deposit the dirt particles back into the felt.

Not all soaps nor detergents are good cleansing agents. In fact, some soaps are very deficient in detergent value. The effieciency of a soap made from fatty acids, present in oil and fats, is dependent upon the temperature of the felt washing solution. Hard fatty acid soaps are insoluble and practically worthless at the low temperatures recommended in felt washing; their efficiency increases as the temperature is raised which improves their solubility, detergency, and other soap-like qualities but is harmful to the felt.

Investigations for an efficient

agent to be used in conjunction with a synthetic detergent indicates the possibility of using a blended low titered soap which has solubility and rinsibility equal to the synthetic detergent employed. These soaps are usually very efficient at low temperatures and have a low degree of hydrolysis; their emulsion is stable, which is desired during the period a felt is being rinsed.

In conclusion I might state the greatest care given a felt both in its operation on the machine and in washing can only be measured in the water removed and the cost of drying the paper. Testing is useful in determining the sources of wear but the results should be carefully interpreted to be of real benefit to the paper maker. I have yet to find a paper maker who was not interested in reducing his felt cost per ton and by obtaining tensile strength determinations suggests one method of approaching his problems. Any one interested in paper machine felt life will find the work listed in the Tappi Bibliographies by Rees, Yoerg and Pattison, Weston, Barstow, C.H.R. Johnson, Vickery, R. W. Mitchell, and Hanke very interesting and applicable to many of their problems.

Low Water Shuts Down Hawley Groundwood Mill

● The Willamette River has now dropped sufficiently that Mill A of the Hawley Pulp & Paper Co. has been shut down for the remainder of the dry season. It is expected to start up again sometime in the latter part of October or in November, when there usually is sufficient water available for the winter grinding season.

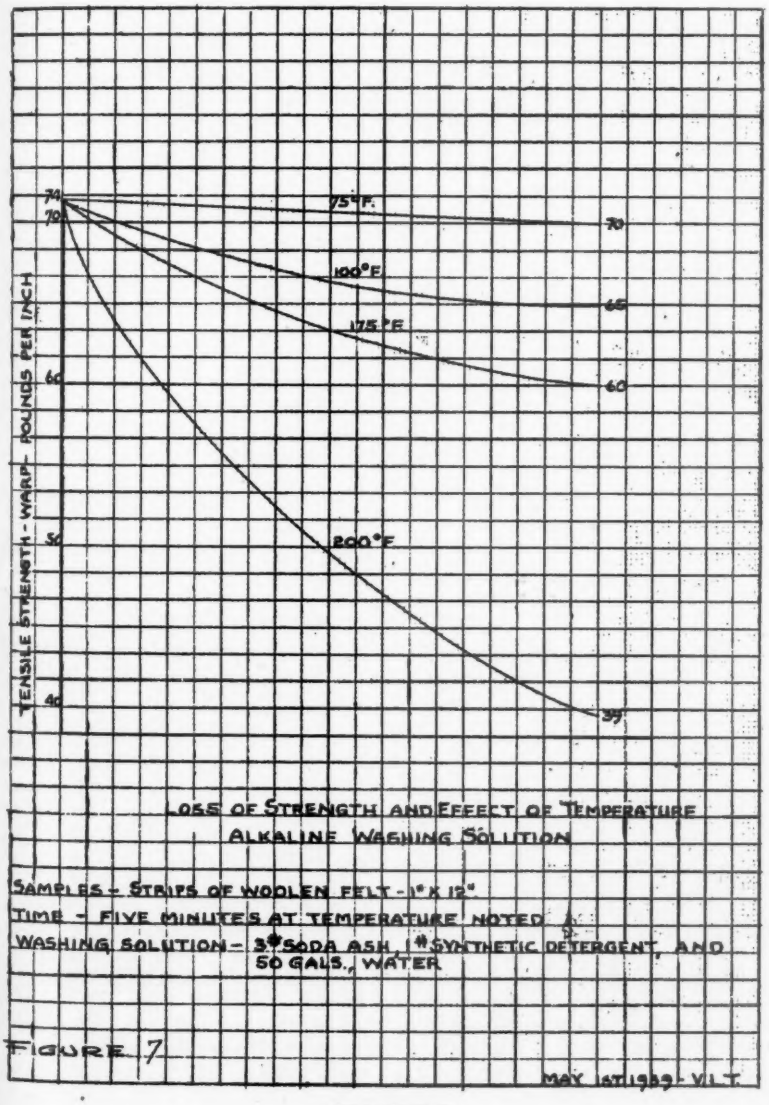


FIGURE 7

Visitors at Coast Mills

● C. K. Boyer, manager of the Interlake division of the Consolidated Paper Co., Appleton, Wis., and Henry P. Baldwin of the same company's plant at Wisconsin Rapids, visited the Coast just before the first of June. They stopped at Everett, Seattle, Camas, Portland, etc., while on a tour of the western mills.

Another visitor was Henry Obermans, vice president in charge of manufacturing for the Hammermill Paper Co. He stopped at Hoquiam, Camas, Portland, and other Coast points.

Other visitors at Pacific Coast mills late in May and early in June were Lloyd C. Daly, vice-president and general superintendent of the American Coating Mills, Incorporated, at Elkhart, Indiana, and Mark M. Whitman, sulphite superintendent of the Marathon Paper Mills Company, Rothschild, Wisconsin.

Two Superintendents At Washington, D.C., Meeting

● Anton Siebers, paper mill superintendent for the Longview Fibre Company of Longview, Washington, left by plane on June 6th to attend the annual convention of the American Pulp and Paper Mill Superintendents Association in Washington, D. C., June 13-15th.

Mr. Siebers, who is first vice-chairman of the Pacific Coast Division of the association, is attending as the official delegate from the Pacific Coast. On his way east he stopped at Kaukauna, Wisconsin, for a short visit with his mother.

James D. Fraser, superintendent of the Pulp Division, Weyerhaeuser Timber Company, Everett, Washington, is also attending the meeting in Washington. Mr. Fraser left the latter part of May on a business trip in the Middle West and East.

Bob Heuer Recovering From Illness

● H. R. "Bob" Heuer of the Weyerhaeuser Timber Co. pulp division at Longview has been ill in recent weeks, but at the time of writing he was responding to treatment in Portland and Longview, and showing continued improvement.

Paul Middlebrook Awarded 25-Year Pin

● On Monday, May 1, Paul Middlebrook, resident mill manager for the Crown Willamette Paper Co., Division of Crown Zellerbach Corp., at Lebanon, Ore., was presented with his 25-year service pin at a dinner which was arranged for him by the foremen, superintendents and department heads. C. E. Bruner, resident manager of the West Linn mill made the presentation representing Vice President Albert Bankus.

Other Crown Zellerbach officials present included M. L. Mammen, Otto Hartwig, Vic Gault and J. A. Ream, all of whom made congratulatory talks. The Lebanon mayor, local senator, business men, etc., also attended.

Mr. Middlebrook made a very interesting acceptance speech, reflecting his experiences with the corporation through 25 years.

W. H. SWANSON, Vice President of TAPPI, presents the Shibley Award check of $50 to L. A. WENDT of the Pulp Division, Weyerhaeuser Timber Co., Everett, at the Saturday luncheon while ANTON SIEBERS, First Vice Chairman of the Pacific Coast Division of the American Pulp & Paper Superintendents Association, looks on.

Tacoma Meeting Draws A Record Crowd

Annual Joint Meeting of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association and the Pacific Section of the Technical Association of the Pulp & Paper Industry, at Tacoma, Washington, June 2nd and 3rd, sets a new record for attendance at a joint meeting

WITH a registration of two hundred and fifty the joint meeting of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association and of the Pacific Section of TAPPI which was held at the Hotel Winthrop in Tacoma, June 2nd and 3rd, set a new record for attendance at joint meetings on the West Coast.

The meeting was not only outstanding because of the larger number of mill men, equipment and supply men who attended but also by reason of the five papers on technical and practical subjects presented on Saturday morning coupled with the always popular feature of the Superintendents' meetings, the Round Table Discussion.

Interest was enhanced by the attendance of three guests from the Middle West and East, W. H. Swanson, vice-president of TAPPI; Dr. Carl E. Curran, chief, Division of Pulp and Paper, U. S. Forest Products Laboratory at Madison, Wisconsin, and R. G. Macdonald of New York, secretary of TAPPI. Mr. Swanson, who lives at Neenah, Wisconsin, is in charge of the Kimberly-Clark Corporation's five chemical pulp mills.

Another guest from the Middle West who renewed many friendships at the meeting, was Mark M. Whitman, sulphite superintendent of the Marathon Paper Mills Company, Rothschild, Wisconsin.

The program which brought the record attendance was arranged under the direction of Niles M. Anderson, general chairman, by a number of hard working committee chairmen and members. Mr. Anderson is assistant superintendent of the St. Regis Kraft Company's bleached sulphate pulp mill at Tacoma and is second vice-chairman of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association.

Friday morning there was no formal program but the early arrivals found the plants of the St. Regis Kraft Company, the Hooker Electrochemical Company and the Pennsylvania Salt Mfg. Co. of Washington open to visitors. Registration began at noon with Earl G. Thompson in charge and Miss Gertrude Julien of the Penn Salt Company assisting.

At 1 p. m. the golf tournament started with over fifty men registering for play over the course of the Tacoma Country and Golf Club. Prizes had been placed on display in the lobby of the Hotel Winthrop Friday morning by William R. Gibson of the Northwest Filter Company, Seattle, who had charge of the awards, and the excellence and number of prizes undoubtedly contributed toward the large number playing and to the intense competition.

For the ladies whose husbands played golf the ladies committee, under Mrs. Niles M. Anderson, had arranged two afternoon cruises on Puget Sound in the luxurious cruiser

"Thea Foss," through the courtesy of the Foss Launch and Tug Company of Tacoma.

Also on the Friday afternoon program was a trip through the ceramic products plant of Gladding, McBean & Company at Renton, Washington, and a number of men took advantage of this opportunity to learn how modern refractories are manufactured.

In the evening an informal cabaret party was held in the roof garden of the hotel at which some danced and others talked, "making" pulp and paper.

Saturday a Busy Day

The idea of starting the Saturday business program off with an early breakfast worked so well the first time it was tried on the Coast in Portland last June and the second time in December at the Superintendents' meeting in Seattle that it has now become a permanent event in the semi-annual meetings of the Superintendents Association.

At 8:30 a. m. one hundred and forty-two men were on hand to greet Roger E. Chase of Tacoma who was toastmaster for the breakfast on June 3rd. It would be more accurate to state that Mr. Chase was on hand to greet the men as they arrived for it was part of his duty to fine the late arrivals and he accumulated a sizeable sum for the treasury by keeping his eye on the door and nailing all the laggards.

R. E. Chase, who headed the committee work for the event, acted as chairman. With him at the speakers' table was Dr. C. E. Curran, W. H. Swanson, R. G. Macdonald, Niles Anderson, A. S. Quinn, Anton Siebers, N. W. Coster, W. T. Webster, L. C. McCurdy and Wm. R. Gibson. Mr. Chase introduced them all to those present, with appropriate music between each introduction, and called for remarks from a number of them.

As toastmaster Mr. Chase introduced himself as the principal speaker and proceeded to wake up the gang with a highly humorous talk on the possibilities for profit now being overlooked by the paper industry. Mr. Chase pointed out that the pulp industry had progressed rapidly into new fields such as rayon and plastics but that the paper industry hadn't exhibited enough imagination. He urged it to discard the old mental shackles and consider the possibilities of his idea which he titled, "Profits From Paper Panties."

It was evident that Mr. Chase had made an exhaustive survey for he had with him a dozen or so charts showing the staggering potentialities of the American market for paper panties. He had even carried his research to the point of design, color and style names.

Laughs are difficult to pry loose from a group of men early in the morning but Mr. Chase succeeded in sending them on to the business meeting in a happy frame of mind.

The Five Papers

With N. W. Coster, chairman of the Pacific Section of TAPPI, and Anton Siebers, first vice-chairman of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association, acting as co-chairman the program of papers got under way.

● "Forest Products Research in Pulping Western Woods," was the subject of a paper by Dr. Carl E. Curran, chief, Division of Pulp and Paper, U. S. Forest Laboratory, Madison, Wisconsin.

● "Objectives in the Various Stages of Pulp Purification," by Thomas E. Moffitt, chemical engineer, Hooker Electrochemical Company, Tacoma, analyzed the common objectives of the several stages in modern bleach plants.

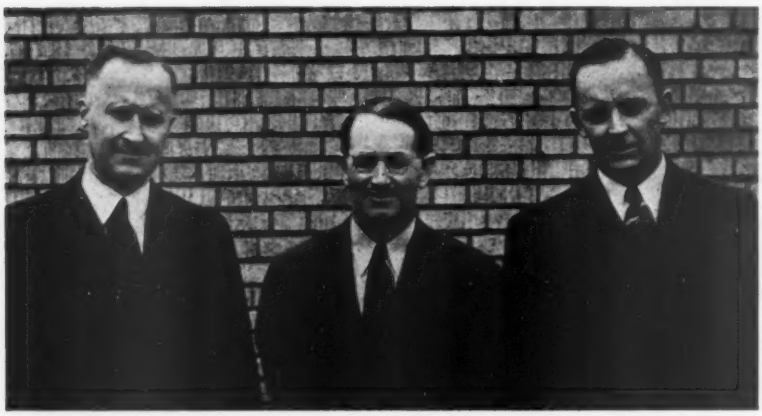
● "Cooking Problems and Cell Walls of Wood," was the subject of a paper offered by Professor Bror L. Grondal, of the College of Forestry, University of Washington. Professor Grondal tied his technical discussion in with practical operations by pointing out that the hammering effect of dull chipper knives on the cell walls breaks down the fibers and frequently accounts for sudden drops in pulp strength.

● "Boost Wood Pulp—A Versatile Raw Material," by Wm. C. McIndoe, industrial chemist of Portland, Oregon, proved an optimistic survey of the possibilities for expanding pulp consumption through development of the chemical utilization industries such as rayon and plastics. Mr. McIndoe emphasized the opportunities for this type of development on the West Coast. In his recent work with the Bonneville Authority Mr. McIndoe made an exhaustive survey of the pulp, paper, rayon and chemical industries as potential users of electrical energy.

● The fifth paper, "The Factors Affecting the Life of Paper Machine Felts," by V. L. Tipka, research engineer of the Hawley Pulp & Paper Company, Oregon City, was read in the afternoon at the Round Table Discussion by Fred A. Olmsted in the absence of Mr. Tipka who had been called East on business.

All five of the above papers are published in this number of Pacific Pulp & Paper Industry.

THE SIX CONTESTANTS for the SHIBLEY AWARD attended the Joint Meeting in Tacoma ' ' ' The first annual Shibley Award of $50 given by the Pacific Section of TAPPI for the best technical paper presented at the 1938-1939 series of dinner meetings, was presented to L. A. WENDT of the Pulp Division, Weyerhaeuser Timber Company, Everett, Washington ' ' ' Left to right, CLAUD CHRISTIANSEN, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; ROBERT M. KUHN, St. Regis Kraft Co., Tacoma; A. ORUP and R. I. THIEME of the Soundview Pulp Co., Everett; L. A. WENDT of the Pulp Division, Weyerhaeuser Timber Co., Everett; and JOHN HOWARTH BARDSLEY of the Powell River Company, Powell River, B. C.



VISITORS AT THE TACOMA MEETING . . . Left to right, R. A. MACDONALD, New York City, Secretary of TAPPI; Dr. CARL E. CURRAN, Madison, Wisconsin, Chief, Division of Pulp and Paper, U. S. Forest Products Laboratory; and W. H. SWANSON, Neenah, Wisconsin, Vice President of TAPPI and in charge of chemical pulp mills for the Kimberly-Clark Corporation.

The Luncheon

Ten years ago at the first TAPPI meeting held in Tacoma Scott Henderson, prominent Tacoma attorney, served as toastmaster. Introduced by A. S. Quinn, secretary-treasurer of the Pacific Coast Division of the Superintendents, Mr. Henderson said he was glad to be back again and renew his acquaintance with the superintendents and technical men of the industry with which he was familiar through his legal work.

Mr. Henderson spoke briefly on today's need for leadership in industry and in governmental affairs and warned that unless more and better leaders developed shortly the American people would lose much of their hard won liberty.

● He said he had been doing some thinking about this word "TAPPI," and it had occurred to him that by reversing the letters it would stand for a summary of today's governmental problems. "IPPAT," said Mr. Henderson, meant "Impotent People Pay Atrocious Taxes." That was the story in all history and he urged that the men at the meeting exercise their individual influence in their respective communities to prevent the American people from becoming impotent in their own government.

E. W. G. COOPER, Chairman Superintendents Association

Mr. Quinn introduced the officers of the two associations and mentioned that E. W. G. Cooper, chairman of the Pacific Coast Division of the Superintendents Association, had asked him to present his best wishes to the convention and his regrets that business had called him to Ocean Falls, B.C., and prevented his attending. Fred C. Shaneman, secretary-treasurer of the Pacific Section of TAPPI, had been called East on business and had asked that his regrets at being unable to attend be given to the meeting. Mr. Quinn then introduced Mr. Coster, chairman of the Pacific Section of TAPPI, who spoke as follows:

"The Pacific Section of TAPPI celebrates today its 10th birthday. Thanks to the farsightedness of those who were in charge of its activities during its earlier years, and to the interest of its parent organization, the Technical Association of the Pulp and Paper Industry, the Pacific Section has grown tremendously during these first ten years of its existence. That National TAPPI is interested in what we are doing can be seen from not only the fact that we have two national officers present at this convention but also from the fact that National TAPPI after having held their 1934 annual Fall Meeting in Portland, Oregon, has accepted the Pacific Section's invitation to hold the 1940 National Fall Meeting in Seattle.

"I believe it is a happy coincidence that the Pacific Section of TAPPI can celebrate its tenth anniversary by presenting its first Shibley Award. The Shibley Award is a cash prize of fifty dollars for the best paper presented at any one of the Section's dinner meetings during one year by one of the younger men employed in the pulp or paper mills within the boundaries of the Section. It is named in memory of the late Kenneth Shibley, one of the best friends and supporters the Section has ever had, who, before he was called away to those lands where no operating problems occur, asked to be permitted to contribute to such a prize as the Section has now established. Kenneth Shibley was a great believer in youth, and helping them to reach the goals they have set up for themselves. He was also a great believer in free thinking without which, in my opinion, no nation, industry or individual can advance, no matter how effective they are now conducting their affairs.

● "One of the objects of TAPPI is to promote technical advancements of our industry and we do not know of any way whereby we could stimulate the interest in these problems among those who are scheduled to once be the leaders of our industry than by encouraging them from the very start to partake in and carry out sound technological research on problems related to not only the operation of our mills but also in finding new uses for our products.

"The results obtained and the interest shown during the first year of the Shibley Award are most encouraging. In front of me are sitting six men whom the Pacific Section of TAPPI are proud to have as their guests today. It is with a great deal of pleasure and satisfaction on my own part that I now introduce them to you:

Mr. John Bardsley, Powell River Company.

Mr. Claud Christiansen, Crown Zellerbach Corporation, Camas.

Mr. Robert Kuhn, St. Regis Kraft Company.

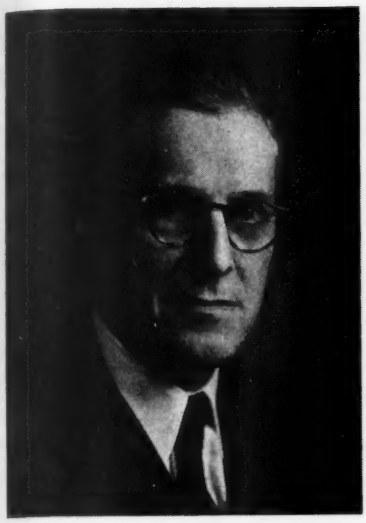
Mr. Adolf Orup, Soundview Pulp Company.

Mr. Irvine Thieme, Soundview Pulp Company.

Mr. Louis Wendt, Everett Pulp Mill, Weyerhaeuser Timber Company.

"To you six men I wish to convey

N. W. COSTER, Retiring Chairman, Pacific Section of TAPPI



FRED A. OLMSTED, Elected Vice-Chairman, Pacific Section of TAPPI

TAPPI's congratulation and thanks. In every new undertaking there is always someone that has got to break the ice, and I think all of you are to be commended for having, not only enough courage to do so, but also for the fact that by entering this competition you must have accomplished something for yourself by which you are now better fitted for more responsibilities.

"To the executives of our industry may I convey TAPPI's thanks for permitting these men to partake in this competition and may I express the hope that now when you have seen the first year's results you will in the future by all possible means encourage your men to partake in the competition for the Shibley Award in which the contestants are not only able to do something for themselves but also by doing so should prove themselves more valuable to you and to the concern that employs them.

"According to the rules which govern the Shibley Award the Executive Committe of the Pacific Section of TAPPI is the body that decides upon the winner and the papers are to be judged on the following three points:

1. The amount of interest shown at the meeting where the paper is presented.
2. Presentation.
3. Technical value.

"It has been a very hard task for us to pick this year's winner because all the papers submitted were very good as was the presentation of them. We hope you will accept our decision in the spirit in which it was rendered; namely, that it is as fair a decision as we are able to give.

"With these words I like to introduce to you the vice-president of the Technical Association of the Pulp and Paper Industry, Mr. W. H. Swanson, who will now present the 1939 Shibley Award to Mr. L. A. Wendt of the Everett Mill, Pulp Division, Weyerhaeuser Timber Company, for his paper entitled: 'A Discussion of the Operation of Photo-Electric Consistency Controllers.' "

● Mr. Swanson, in handing the check for fifty dollars to Mr. Wendt said, "Mr. Wendt, I am deeply honored to have been chosen to present the first Shibley Award, and I congratulate you upon your success. In accepting the award Mr. Wendt replied, "I accept with a deep respect for TAPPI and its program of contributing to the pulp and paper industry through development of the younger men. I wish to thank the Pacific Section for this award and for the opportunity it has given to me and to all the men of the Pacific Coast industry."

Mr. Swanson remarked that this was his first visit to the Pacific Coast since September of 1934 when he attended the national meeting in Portland. He had benefitted by that trip, he said, and was getting much from his present trip. In the future he hoped he could come oftener and was now planning to attend the 1940 national meeting in Seattle.

R. G. Macdonald, of New York, secretary of TAPPI, spoke briefly saying that it was the aim of the national organization to send at least one national officer each year to attend the June meeting of the Pacific Section. In referring to the 1940 meeting in Seattle, Mr. Macdonald stated that interest was already developing among the technical men throughout the country and he fully expected a larger number would be in Seattle than attended the Portland meeting in 1934.

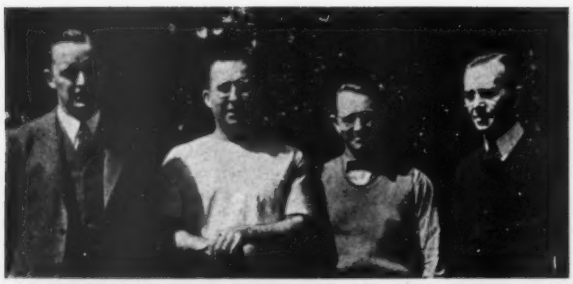
A. H. Hooker, Jr., chairman of the golf committee, awarded the prizes to the winners of Friday afternoon's tournament by asking each recipient to stand and tell what prize he had won, the name of the donor and his score.

The Ohio Knife Trophy which was won for the first time in 1938 by Carl Fahlstrom, technical superintendent of the Longview Fibre Company, moved to Tacoma and into the possession of Frank Keuss of the St. Regis Kraft Company, who had a low gross for 18 holes of 73.

Among the mill men playing, Pete Herreschou of the St. Regis Kraft Company had the highest gross, 117. Wm. T. Webster of the same company had the low net of 66.

Jack Wilcox of St. Regis had the longest drive on No. 9, while George H. McGregor, Pulp Division Weyerhaeuser Timber Company, Longview, had the longest drive on No.

BREAKFAST at 8:30 on Saturday morning started the 142 men off together on a busy day of papers and Round Table Discussion ✓ ✓ ✓ ROGER E. CHASE of Tacoma, as chairman presented a humorous program.



16. Closest to the hole on No. 6 was Carl Fahlstrom of the Longview Fibre Company, and N. W. Coster of the Soundview Pulp Company was closest to the No. 11 hole.

The second low gross prize went to Milt Engerson of the St. Regis Kraft Company with an 85, and the second low net to J. A. Wilcox of the Longview Fibre Company with a 70.

Among the supply and equipment men Zina A. Wise of the Griffith Rubber Mills, Portland, was the holder of the low gross with an 84. Harlan Scott of Pacific Pulp & Paper Industry, Seattle, topped the field with a high gross of 130.

Kenneth Howe of the Westinghouse Electric & Manufacturing Co., Seattle, possessed the low net. W. A. Clines of the General Chemical Company, San Francisco, had the long drive on No. 9, and Walter Salmonson of Simonds - Worden - White Company, Seattle, had the long drive on No. 16.

Blaine L. Kerns of Westinghouse, Seattle, was closest to the 6th hole, and Walter Bauman of the Pennsylvania Salt Manufacturing Co. of Washington, Tacoma, was closest to the 11th hole.

Sitting at the speaker's table at the Saturday luncheon were: William T. Webster, Anton Siebers, Fred A. Olmsted, Dr. C. E. Curran, L. S. McCurdy, N. W. Coster, R. G. Macdonald, W. H. Swanson, Niles Anderson, A. H. Hooker, Jr.

TAPPI Officers

The Pacific Section of TAPPI holds its annual election at the June meeting. At the business metting prior to the luncheon, Fred A. Olmsted, techincal supervisor of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, was elected vice-chairman of the Pacific Section for 1939-1940.

Fred C. Shaneman, manager of the Pennsylvania Salt Manufacturing Company of Washington, Tacoma, was elected secretary-treasurer. Mr. Shaneman, who was unable to be present due to business in the East, has been serving as secretary-treasurer since late last Fall, filling the unexpired term of J. V. B. Cox of the Paper Makers Chemical Division of the Hercules Powder Company, Portland, who resigned on account of illness.

Dr. H. V. Tartar, professor of chemistry, University of Washington, Seattle, was elected a member of the executive committee. N. W. Coster, the retiring chairman of the Pacific Section, automatically becomes a member of the executive committee.

FRED C. SHANEMAN, Elected Secretary-Treasurer, Pacific Section of TAPPI

SNAPSHOTS AT THE TACOMA MEETING

On the opposite page are snapshots of most of the foursomes participating in the golf tournament held at the Tacoma Country and Golf Club on the afternoon of June 2nd.

In No. 1 — Left to Right: W. H. SWANSON of Neenah, Wisconsin, Vice President of TAPPI; H. A. "GOB" DES MARAIS, Pacific Coast Manager of General Dyestuff Corp., San Francisco; DR. CARL E. CURRAN, Chief of the Division of Pulp and Paper, U. S. Forest Products Laboratory, Madison, Wis., and KENNETH B. HALL, Pacific Coast Representative, Improved Paper Machinery Corp., Portland.

No. 2 — W. A. SALMONSON, Simonds Worden White Co., Seattle; J. B. SYMONDS, Sinclair Wire Co., Seattle, and C. J. McALLISTER, Simonds Worden White Co., Portland. In No. 3 — R. N. KUHN, M. A. ENGERSON, W. J. FEENEY and HUGO TRYGG all of the St. Regis Kraft Co., Tacoma. In No. 4 — HENRY LOREN of the Westinghouse Electric & Mfg. Co., Tacoma; ARTHUR DRIPS, Manager of the Everett Pulp and Paper Company's mill at West Tacoma, and L. G. FEAR, Westinghouse Electric & Mfg. Co., Portland.

In No. 5 — JERRY STRASSER, Stein-Hall Mfg. Co., Chicago; DON L. SHIRLEY, Manager, Link-Belt Co., Portland; CARL FAHLSTROM, Technical Superintendent Longview Fiber Co., Longview, and WALTER BAUMANN, Pennsylvania Salt Mfg. Co., Tacoma. No. 6 — PETE HARRESCHOU of the St. Regis Kraft Co., Tacoma; W. M. CLINES, General Chemical Co., San Francisco; JAMES OSBORNE, General Chemical Co., Portland, and A. S. GERRY, Pulp Division, Weyerhaeuser Timber Co., Everett. In No. 7 — W. D. MARSHALL, Heller & Merz Corp., Portland, and R. V. MAIER, General Electric Co., Portland.

No. 8 — MARK WHITMAN, Sulphite Superintendent, Marathon Paper Mills, Rothschild, Wis. No. 9 — A snap of the gallery. FRED A. OLMSTED, newly elected Vice Chairman of TAPPI and Technical Supervisor Camas Mill, Crown Willamette Paper Co., Division of Crown Zellerbach Corp.; R. A. MACDONALD, National Secretary of TAPPI, New York City, and CLAUD CHRISTIANSEN, Technical Control Department, Camas. No. 10 — JOE McQUAID, Griffith Rubber Mills, Seattle; HARLAN SCOTT, Editor, Pacific Pulp & Paper Industry, Seattle; N. W. COSTER, Retiring Chairman of Pacific Section of TAPPI and Technical Director, Soundview Pulp Co., Everett, and A. S. QUINN, Secretary-Treasurer of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association and Vice President of the Stebbins Engineering Corp., Seattle.

No. 11 — A. H. HOOKER, JR., Hooker Electrochemical Co., Tacoma; GEORGE H. McGREGOR, Superintendent, Pulp Division, Weyerhaeuser Timber Co., Longview; Z. A. WISE, President, Griffith Rubber Mills, Portland, and J. H. McCARTHY, Resident Engineer, Soundview Pulp Co. In No. 12 — J. M. WILCOX, Resident Engineer, St. Regis Kraft Co., Tacoma; WILLIAM T. WEBSTER, General Superintendent, St. Regis Kraft Co., Tacoma; J. A. WILCOX, Longview Fiber Co., Longview, and F. G. KEUSS, St. Regis Kraft Co., Tacoma. Mr. Keuss won the tournament with the low gross score.

In No. 13 — BLAINE L. KERNS, Westinghouse Electric & Mfg. Co., Seattle; H. NORMAN MILLER of Westinghouse in Portland; K. L. HOWE, Westinghouse, Seattle, and LAWRENCE K. SMITH, Manager, Pacific Pulp & Paper Industry, Seattle.

● It was announced by Mr. Coster that unavoidable circumstances had prevented the nominating committee of which W. R. Barber, technical director of the Crown Zellerbach Corporation, was chairman, from presenting at that time a candidate for chairman of the Pacific Section in 1939-1940. Within sixty days, Mr. Coster said, an election for chairman will be held and the balloting will be carried on by mail.

It was announced at the luncheon that Anton Siebers, first vice-chairman of the Pacific Coast Division of the Superintendents Association, had been elected as official delegate from the Pacific Coast to the Twentieth Annual Convention of the Association at Washington, D. C., June13-15th at the morning business meeting. Mr. Siebers is paper mill superintendent of the Longview Fibre Company, Washington.

Officers of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association are elected at the December meeting.

The Round Table

After luncheon the men adjourned to the roof garden for the feature of all Superintendents' meetings, the Round Table Discussion. Leading the discussion of operating problems were Anton Siebers, first vice-chairman of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association and L. S. McCurdy, fifth vice-president of the national association and a past chairman of the Pacific Coast Division.

V. L. Tipka's paper on, "The Factors Affecting The Life of Paper Machine Felts," was read in Mr. Tipka's absence in the East by Fred A. Olmsted. Discussion followed.

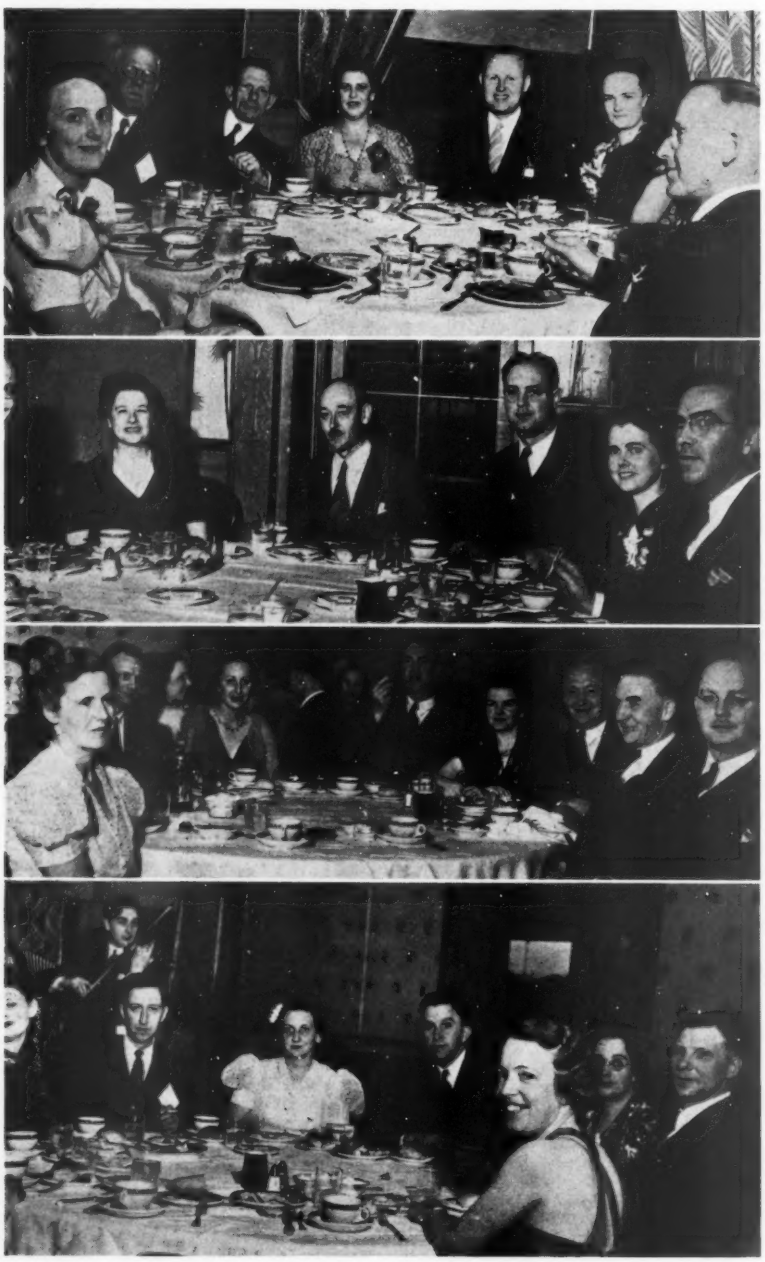
The remainder of the afternoon was devoted to the pro and con discussion of questions which had been handed in prior to the meeting and also to questions from the floor.

Saturday Evening

Before the banquet a reception was held in honor of W. H. Swanson, Neenah, Wisconsin, vice-president of TAPPI and in charge of the Kimberly-Clark Corporation's chemical pulp mills, R. G. Macdonald, New York, sectretary of TAPPI, and Dr. C. E. Curran, chief, Division of Pulp and Paper, U. S. Forest Products Laboratory, Madison, Wis.

The banquet program consisted of music, the introduction of those at the head table by General Chairman Niles M. Anderson, the awarding of door prizes and the expression of appreciation by Mr. Anderson to those who assisted in making the meeting a great success.

At the head table were: Mr. and Mrs. William T. Webster, Mr. and Mrs. N. W. Coster, Mr. and Mrs. G. S. Brazeau (Mr. Brazeau is a member of the Executive Committee of National TAPPI), Mr. and Mrs. Niles M. Anderson, Mr. and



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AT THE BANQUET

On Saturday evening, a few of the 262 guests were caught by the camera . . .

In the top picture, left to right, J. B. SYMONDS, Mrs. W. A. SALMONSON, GEORGE G. GUILD, Mr. and Mrs. IRVING R. GARD, W. A. SALMONSON, Mrs. N. O. GALTELAND and S. A. SALMONSON.

In the second photograph, left to right, Mr. and Mrs. THOMAS J. BANNAN, RAY SMYTHE, BERK BANNAN, Miss GERTRUDE JULIEN and EARL G. THOMPSON.

The third picture shows, left to right, Mrs. A. H. HOOKER, Jr., Mrs. L. E. HILL, D. V. HAMILTON, Mrs. CHARLES H. MARTIN, L. E. HILL, Mrs. TOM MOFFITT, A. H. HOOKER, Jr., TOM MOFFITT and CHARLES H. MARTIN.

In the bottom picture, left to right, Miss GARLAND, HOMER GARLAND, Mrs. CHARLES D. PARKER, C. J. McALLISTER, Mrs. HOMER GARLAND, Mrs. C. J. McALLISTER and P. F. SKOOG.

Mrs. L. S. McCurdy, Mr. and Mrs. Anton Siebers, Mr. and Mrs. A. S. Quinn, W. H. Swanson, R. G. Macdonald and Dr. C. E. Curran.

Mr. Anderson, as general chairman of the meeting, thanked each of the committee chairmen and members for himself and in the name of the two associations. As he spoke he introduced each chairman to the two hundred and sixty-two guests at the banquet.

Following the banquet a dance was held in the Crystal ballroom concluding the largest joint meeting held to date on the Pacific Coast.

The Ladies' Program

The committee in charge of entertaining the ladies at the joint meeting in Tacoma provided a most interesting program. Friday afternoon, through the courtesy of the Foss Launch and Tug Company the large cruiser the "Thea Foss" made two trips on Puget Sound.

On Saturday the ladies enjoyed a trip to Paradise Inn on Mount Rainier where they had luncheon. The trip and the luncheon were provided by the Hooker Electrochemical Company and the Pennsylvainia Salt Manufacturing Company of Washington as a compliment to the ladies attending the convention.

For those who did not take the trip to Paradise Inn the "Thea Foss" made another cruise on Puget Sound on Saturday afternoon.

On the ladies committee were Mrs. Niles M. Anderson, chairman, Mrs. Fred C. Shaneman, Mrs. William T. Webster and Mrs. Walter S. Hodges.

Those Who Made the Meeting a Success

Behind all successful conventions there is always a small group of men and women who plan and execute the thousand and one details which contribute to the enjoyment of those who attend.

Heading the list is Niles M. Anderson who, as general chairman, planned the meeting program and worked with his several chairmen to make sure no detail was overlooked. Mr. Anderson is second vice-chairman of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association, and assistant superintendent of the S. Regis Kraft Company's bleached sulphate pulp mill in Tacoma.

In charge of registration was Earl G. Thompson, past secretary-treasurer of the Pacific Section of TAPPI and northwest representative of the Great Western Electrochemical Company, Division of The Dow Chemical Company. Assisting him was Miss Gertrude Julien, secretary to Fred C. Shaneman, manager of the Pennsylvania Salt Manufacturing Company of Washington in Tacoma.

Albert H. Hooker, Jr., western sales manager of the Hooker Electrochemical Company, Tacoma, was in charge of the golf tournament and the awarding of the golf prizes.

Roger E. Chase, president of the R. E. Chase & Company, manufactruers' representatives, of Tacoma, was in charge of the Saturday breakfast program.

William T. Webster, general superintendent of the St. Regis Kraft Company, Tacoma, and vice-chairman of the Pacific Section of TAPPI, obtained the five papers presented at the meeting.

Fred C. Shaneman, manager of the Pennsylvania Salt Manufacturing Comapny of Washington, Tacoma, was in charge of the banquet and entertainment. As Mr. Shaneman was called East on business, B. R. Gardner of the Penn Salt organization took over the entertainment program.

William R. Gibson, president of the Northwest Filter Company, Seattle, rounded up the long list ot prizes for golf and for door awards.

Mrs. Niles Anderson served as chairman of the ladies committee and with her were Mrs. Fred C. Shaneman, Mrs. William T. Webster and Mrs. Walter S. Hodges.

Prizes were donated by the following thirty-three companies:

Albany Felt Company, Allis-Chalmers Manufacturing Co., E. C. Atkins & Company, John W. Bolton & Sons, Bristol Company, Chain Belt Company, Consolidated Supply Company, Crucible Steel Company, Doran Company.

Electric Steel Foundry Company, Foxboro Company, Garlock Packing Company, Hercules Powder Company, Hooker Electrochemical Co., Huntington Rubber Mills, Messrs. Kerns, Harrison and Loren of the Westinghouse Electric & Mfg. Co., Knox Woolen Co., Lor-

NILES M. ANDERSON as General Chairman was in charge of all arrangements of the Joint meeting in Tacoma of the Superintendents and TAPPI . . . Mrs. ANDERSON served as chairman of the Ladies Committee which provided the boat trips and the motor trip to Paradise Inn for the ladies attending the convention . . . Mr. Anderson is Assistant Superintendent of the St. Regis Kraft Company's bleached sulphate pulp mill in Tacoma, and second Vice-Chairman of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association.

WILLIAM T. WEBSTER, Vice-Chairman, Pacific Section of TAPPI. Arranged the papers presented.

ing, Coes Co., Moline Malleable Iron Co.

National Aniline & Chemical Co., Northwest Filter Company, Northwest Lead Company, Ohio Knife Co., Pioneer Stationers, Puget Sound Sheet Metal Works, Scientific Supply Co., Shaub-Ellison Co., Simonds Saw and Steel Co.

Stetson-Ross Machine Co., Washington Hardware Co., Webster-Brinkley Company, Western Gear Works, Westinghouse Electric & Mfg. Co.

Following is the list of registration at the Tacoma joint meeting on June 2nd and 3rd, 1939:

● **Mr. and Mrs. C. E. Ackley,** Hawley Pulp & Paper Co., Oregon City; **Gerald C. Alcorn,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Mr. and Mrs. Charles Anderson,** St. Regis Kraft Co., Tacoma; **Mr. and Mrs. Niles Anderson,** St. Regis Kraft Co., Tacoma; **Fred Armbruster,** Powell River Co., Ltd., Powell River, B. C.; **G. J. Armbruster,** Soundview Pulp Co., Everett; **B. A. Bannan,** Western Gear Works, Seattle; **Mr. and Mrs. Tom Bannan, Western Gear Works,** Seattle.

W. R. Barber, Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; **John Howarth Bardsley,** Powell River Co., Powell River, B. C.; **C. M. Barr,** Cavin, Marshall & Barr, Seattle; **W. R. Baumann,** Pennsylvania Salt Mfg. Co., Tacoma; **T. H. Beaune,** Fibreboard Products, Inc., Port Angeles; **C. H. Belvin,** Chromium Corp. of America, Portland; **Dr. H. K. Benson,** Department of Chemistry, University of Washington, Seattle; **W. L. Beuschlein,** Department of Chemistry, University of Washington, Seattle; **Mr. and Mrs. A. L. Bibbins,** Electric Steel Foundry Co., Seattle.

Paul Billington, Pulp Division, Weyerhaeuser Timber Co., Longview; **B. B. Biddle, Jr.,** Leeds & Northrup, San Francisco; **M. W. Black,** Inland Empire Paper Co., Millwood; **R. C. Bledsoe,** Powell River Co., Ltd., Powell River, B. C.; **Mr. and Mrs. Carl E. Braun,** Hawley Pulp & Paper Co., Oregon City; **Mr. and Mrs. G. S. Brazeau,** Pulp Division, Weyerhaeuser Timber Co., Everett.

Mr. and Mrs. Wm. E. Breitenbrach, Rayonier Incorporated, Grays Harbor Division, Hoquiam; **Martin Breuer,** E. I. Du Pont de Nemours & Co., San Francisco; **Mr. and Mrs. G. C. Brewster,** Northwest Screen Specialty Works, Shelton; **John E. Brown,** Pacific Pulp & Paper Industry, Portland; **Ray Brown,** St. Helens Pulp & Paper Co., St. Helens; **D. L. Bumstead, Jr.,** C. C. Moore & Co., Engineers, Seattle; **Mr. and Mrs. A. M. Cadigan,** St. Regis Kraft Co., Tacoma; **Mr. and Mrs. R. D. Campbell,** St. Regis Kraft Co., Tacoma.

Mr. and Mrs. R. S. Carey, National Aniline & Chemical Co., Portland; **Mr. and Mrs. John N. Carlson,** Soundview Pulp Co., Everett; **O. S. Cauvel,** Washington Pulp & Paper Co., Port Angeles; **Oscar K. Chapman,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Dan Charles,** Knox Woolen Mills-Loring Coes Co., Seattle; **Mr. and Mrs. R. E. Chase,** R. E. Chase & Co., Tacoma; **C. Christensen,** Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; **Wm. M. Clines,** General Chemical Co., San Francisco; **Mr. and Mrs. Sidney M. Collier,** Puget Sound Pulp & Timber Co., Bellingham; **Mr. and Mrs. G. Cormier,** St. Regis Kraft Co., Tacoma.

Mr. and Mrs. N. W. Coster, Soundview Pulp Co., Everett; **A. H. Cox,** A. H. Cox & Co., Seattle; **C. G. Crawford,** Pelton Water Wheel Co., San Francisco; **J. A. Cunningham,** Simonds Saw & Steel Co., Tacoma; **Dr. C. E. Curran,** U. S. Forest Products Laboratory, Madison, Wisconsin; **C. W. Davies,** Standard Oil Co., Seattle; **E. A. Davis,** Shell Oil Co., Seattle; **Mr. and Mrs. J. J. Davis,** Electric Steel Foundry Co., Portland; **H. A. Des Marais,** General Dyestuffs Corp., San Francisco; **E. F. Drake,** National Paper Products Co., Division of Crown Zellerbach Corp., Port Townsend.

R. E. Drane, St. Helens Pulp & Paper Co., St. Helens; **Mr. and Mrs. E. G. Drew,** J. O. Ross Engineering Corp., Portland; **K. Ivar Ekholm,** National Aniline & Chemical Co., Now York City; **Carl Fahlstrom,** Longview Fibre Co., Longview; **Mr. and Mrs. F. J. Feeney,** St. Regis Kraft Co., Tacoma; **O. E. Fox,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Mr. and Mrs. Irving R. Gard,** Merrick Scale Mfg. Co., Seattle; **Mr. and Mrs. W. R. Gibson,** Northwest Filters, Inc., Seattle; **George Gladding,** Soundview Pulp Co., Everett; **Mr. and Mrs. Lester T. Graham,** Link-Belt Co., Seattle; **Bror L. Grondal,** Forestry Dept., University of Washington, Seattle; **George G. Guild,** Huntington Rubber Mills, Seattle; **Mr. and Mrs. Kenneth B. Hall,** Improved Paper Machinery Corp., Portland.

D. V. Hamilton, Pulp Division, Weyerhaeuser Timber Co., Everett; **R. N. Hammond,** Pulp Division, Weyerhaeuser Timber Co., Longview; **Mr. and Mrs. Ray C. Hansen,** National Tank & Pipe Co., Portland; **S. H. Harrison,** Westinghouse Electric & Mfg. Co., Seattle; **Mr. and Mrs. P. L. Harreschou,** St. Regis Kraft Co., Tacoma; **H. P. Hartley,** Fibreboard Products, Inc., Sumner: **R. S. Hatch,** Weyerhauser Timber Co., Longview; **Mr. and Mrs. W. H. Haverman,** Pulp Division, Weyerhaeuser Timber Co., Longview; **A. D. Hawley,** Pacific Coast Supply Co., Seattle; **W. M. Heiple,** Shell Oil Co., Tacoma; **Mr. and Mrs. W. J. Higbie,** Hercules Powder Co., Portland; **Lee Hill,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Mr. and Mrs. Walter S. Hodges and Adele Hodges,** Appleton Wire Works, Portland; **Mr. and Mrs. John Hoffman,** J. O. Ross Engineering Corp., Portland; **C. F. Holcomb,** Edison Storage Battery Supply Co., Seattle.

Mr. and Mrs. Albert H. Hooker, Jr., Hooker Electrochemical Co., Tacoma; **O. L. Hudrlik,** Portland; **L. T. Johnson,** Hawley Pulp & Paper Co., Oregon City; **H. M. Jones,** Ohio Knife Co., Seattle; **Mr. and Mrs. Edward L. Keepers,** Tacoma; **Mr. and Mrs. Leo C. Kelley,** B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; **W. A. Kelly,** The Waterbury Felt Co., Portland; **Mr. and Mrs. Ernie Kertz,** John W. Bolton & Sons, Inc., Portland; **Mr. and Mrs. Frank G. Keuss,** St. Regis Kraft Co., Tacoma; **J. O. Kjome,** Scientific Supplies Co., Seattle; **Dr. K. A. Kobe,** University of Washington, Seattle; **Robert Kuhn,** St. Regis Kraft Co., Tacoma; **William Kun,** Simonds Saw & Steel Co., Seattle.

Mr. and Mrs. A. H. Lundberg, A. H. Lundberg Co., Seattle; **R. G. Macdonald,** Secretary of TAPPI, New York City; **R. V. Maier,** General Electric Co., Portland; **J. C. Mannion,** Rayonier Incorporated, Grays Harbor Division, Hoquiam; **Mr. and Mrs. W. G. Marshall,** Heller & Merz Corp., Portland; **Mr. and Mrs. R. W. Martig,** Control Equipment Co., Portland; **Charles H. Martin,** H. D. Fowler Co., Seattle; **Mr. and Mrs. C. J. McAllister,** Simonds Worden White Co., Portland; **Mr. and Mrs. J. H. McCarthy,** Soundview Pulp Co., Everett; **Mr. and Mrs. A. C. McCorry,** St. Regis Kraft Co., Tacoma.

● **Mr. and Mrs. L. S. McCurdy,** National Paper Products Co., Division Crown Zellerbach Corp., Port Townsend; **Mr. and Mrs. Geo. H. McGregor,** Pulp Division, Weyerhaeuser Timber Co., Longview; **W. C. McIndoe,** Industrial Chemist, Portland; **Leonard McMaster,** Asten Hill Mfg. Co., Philadelphia; **Joe E. McQuaid,** Griffith Rubber Mills, Seattle; **A. D. Merrill,** Chemipulp Process, Inc., Watertown, N. Y.; **F. R. Meyer,** Standard Oil Co., Seattle; **H. O. Meyers,** Fibreboard Products, Inc., Sumner; **H. Norman Miller,** Westinghouse Electric & Mfg. Co., Portland; **Mr. and Mrs. K. M. Milligan,** Northwest Lead Co., Seattle.

A. S. QUINN, Secretary-Treasurer Superintendents Association

Mr. and Mrs. T. E. Moffitt, Hooker Electrochemical Co., Tacoma; **Mr. and Mrs. D. C. Morris,** James Brinkley Co., Seattle; **F. A. Olmstead,** Crown Willamette Paper Co., Division Crown Zellerbach Corp., Camas; **Mr. and Mrs. A. Orup,** Soundview Pulp Co., Everett; **W. M. Osborn,** Hooker Electrochemical Co., Tacoma; **J. Osborn,** General Chemical Co., Portland; **Mr. and Mrs. C. D. Parker,** Faffnir Bearing Co., Seattle; **Mr. and Mrs. R. T. Petrie,** Bagley & Sewall Co., Portland; **Paul Pittenger,** Pulp Division, Weyerhaeuser Timber Co., Everett.

R. K. Prince, Pulp Bleaching Corp., Orange, N. J.; **Mr. and Mrs. A. S. Quinn,** Stebbins Engineering Co., Seattle; **Mr. and Mrs. Carl A. Ramstad,** Soundview Pulp Co., Everett; **H. A. Rehnberg,** Northwest Filter Co., Seattle; **Donald Richards,** B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; **H. H. Richmond,** Electric Steel Foundry Co., Portland; **Carl Ries,** Pulp Division, Weyerhaeuser Timber Co., Everett; **C. D. Ries,** General Electric Co., Seattle; **James Ruck,** St. Regis Kraft Co., Tacoma; **A. J. Sahlberg,** Howard Cooper Corp., Seattle.

Mr. and Mrs. S. A. Salmonson, Soundview Pulp Co., Everett; **Mr. and Mrs. W. A. Salmonson,** Simonds Worden White Co., Seattle; **M. E. Sanford,** Fibreboard Products, Inc., Sumner; **Mr. and Mrs. Harlan Scott,** Pacific Pulp & Paper Industry, Seattle; **George E. Schmidt,** Pennsylvania Salt Mfg. Co., Tacoma; **J. E. Shackelton,** Columbia Steel Co., Seattle; **A. W. Shaw,** Ingersoll Rand Co., Portland; **J. Shedd,** Everett Pulp & Paper Co., Everett; **Mr. and Mrs. B. L. Shera,** Pennsylvania Salt Mfg. Co., Tacoma; **T. M. Shields,** Simonds Saw & Steel Co., Seattle.

D. L. Shirley, Link Belt Co., Portland; **Mr. and Mrs. Carl Sholderbrand,** Hawley Pulp & Paper Co., Oregon City; **Mr. and Mrs. Anton Siebers,** Longview Fibre Co., Longview; **P. S. Simcoe,** National Paper Products Co., Division Crown Zellerbach Corp., Port Townsend; **P. F. Skoog,** Puget Sound Pulp & Timber Co., Bellingham; **C. V. Smith,** St. Helens Pulp & Paper Co., St. Helens; **Mr. and Mrs. Lawrence K. Smith,** Pacific Pulp & Paper Industry, Seattle; **Ray Smythe,** Portland; **Jerry P. Strasser,** Stein Hall Mfg. Co., Chicago.

Franz Sturm, Oregon Pulp & Paper Co., Salem; **Philip E. Sullivan,** Ingersoll Rand Co., Seattle; **J. Symmonds,** Sinclair Wire Co., Seattle; **W. H. Swanson,** Kimberly Clark Corp., Neenah, Wisc.; **Dr. H. V. Tartar,** University of Washington, Seattle; **Mr. and Mrs. A. Ward Tedrow,** Oswego; **R. I. Thieme,** Soundview Pulp Co., Everett; **Mr. and Mrs. M. W. Thom,** Sidney Roofing & Paper Co., Victoria, B. C.; **Earl G. Thompson,** Great Western Electro-Chemical Co., Division of the Dow Chemical Co., Seattle; **C. O. Tripplet,** Hawley Pulp & Paper Co., Oregon City.

R. M. True, General Dyestuffs Co., Portland; **Mr. and Mrs. Hugo Trygg,** St. Regis Kraft Co., Tacoma; **Mr. and Mrs. James Turek, Jr.,** Stein Hall Mfg. Co., Portland; **Mr. and Mrs. A. S. Viger,** Rayonier Incorporated, Shelton Division, Shelton; **Russell Vognild,** Hooker Electrochemical Co., Tacoma; **Ed. A. Vohs,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Mr. and Mrs. T. J. Waltman,** Ohio Knife Co., Portland; **Mr. and Mrs. H. F. Warren,** R. E. Chase & Co., Tacoma; **L. H. Wear,** Taylor Instrument Companies, Portland; **E. A. Webber,** Oregon Pulp & Paper Co., Salem.

• **Mr. and Mrs. Wm. T. Webster,** St. Regis Kraft Co., Tacoma; **C. T. Welsh,** Spear & Jackson Saws, Tacoma; **L. A. Wendt,** Pulp Division, Weyerhaeuser Timber Co., Everett; **Mr. and Mrs. Forrest West,** St. Regis Kraft Co., Tacoma; **Mr. and Mrs. E. V. White,** University of Idaho, Forestry Dept., Moscow; **Mark Whitman,** Marathon Paper Co., Rothschild, Wis.; **Mr. and Mrs. J. A. Wilcox,** Longview Fibre Co., Longview; **Mr. and Mrs. J. M. Wilcox,** St. Regis Kraft Co., Tacoma; **Zina A. Wise,** Griffith Rubber Mills, Portland; **Mr. and Mrs. Edw. P. Wood,** Pulp Division, Weyerhaeuser Timber Co., Longview; **L. R. Wood,** Rayonier Incorporated, Grays Harbor Division, Hoquiam; **L. F. Wray,** Simonds Saw & Steel, Seattle.

The British Columbia Pulp Projects

• There have been so many rumors during the past few years concerning new pulp and paper projects in British Columbia that new ones are usually accepted with skepticism by those already engaged in the industry. If every rumor had materialized, there would be double the present number of producing mills, and British Columbia would be producing the greatest variety of pulp products in any one section of the continent.

With the gradual return of better business conditions, however, there seems to be solid ground for the belief that at least one or two of the projected enterprises will pass into reality. Most people in discusing the possibilities of new pulp and paper mills have overlooked the huge capital investment necessary. Few industries require a greater initial outlay. With money markets influenced to such a degree by political unsettlement at home and abroad it has required a good deal of optimism to produce the necessary five million or more dollars required to get construction under way. With pulp and paper prices at their present levels the money is even more cautious than it would otherwise be.

There were high hopes that Nootka Wood Products, Ltd., would have branched out into pulp production by this time, and the visit last fall of Sir Malcolm Stewart was expected to be merely a preliminary to the "go ahead" signal. But Sir Malcolm unfortunately arrived on the day that the Munich crisis developed, and, like other Englishmen, felt that probably a more propitious time should be awaited for large overseas investment.

The much talked about Prince Rupert pulp deal is still marking time, with apparently no progress made in recent months. It is still a question of financing.

The outlook for the more recently organized Deep River Development Company is similarly indefinite, although Valentine Quinn and William Meehan, chief promoters of the enterprise, are confident that there will be action sometime this summer. Meanwhile the company is going ahead with surveys in the Campbell River area of Vancouver Island, the proposal being to harness the power of Elk Falls.

Latest report in circulation concerns the prospect of establishment of mills in British Columbia for the manufacture of celanese rayon, cellophane and similar products. A well financed company already engaged in large-scale industrial production in British Columbia is believed to be behind this scheme, but its identity continues to be a closely guarded secret. Spokesmen for Bloedel, Welch & Stewart, one of the biggest sawmill and logging companies in British Columbia, deny that they have any present intention of embarking on any phase of pulp production, although reports continue to link their name with developments of this kind.

Just how the market would receive British Columbia-made celanese and cellophane is a matter of speculation, some maintaining that the market in Western Canada would be inadequate for the support of a large-scale plant and that the tariff would exclude its products from the United States.

However, the Canadian Celanese Company, with head office in Montreal, is operating profitably and at capacity for the eastern markets. Except for a temporary slowing down last summer, the plant at Cowansville, Que., has been working on a full-time basis for months. One reason for the good showing was that the company obtained advance information on the colors favored by the Queen for her American tour, and a large quantity of fabrics was made up of varying shades of royal blue. The product met with a strong trade reception.

Last month Canadian Celanese entered into an agreement with Trubenizing Process Company whereby it became the Canadian owner of rights to the process for the manufacture of fused collars. "Woolen" fabrics have also been introduced.

Canada Encourages Improvements and Expansion

• British Columbia pulp and paper companies planning expansion during the next three years will be encouraged by reduced taxes.

To promote building and construction at this time the Canadian government has adopted a program which will have the effect of deducting from income taxes which would otherwise be payable, amounts not exceeding in the aggregate ten per cent of capital costs actually incurred and paid in the period beginning May 1, 1939, and ending April 20, 1940, in respect to the construction, installation, betterment, replacement or extension of plant, machinery or fixed equipment.

In addition, during the three years following April 30, 1940, income taxes of companies carrying out expansion projects will also be reduced arbitrarily.

New Portland First Aid Car Demonstrated at Hawley Mill

● On May 24 the safety first classes and other employees of the Hawley Pulp & Paper Company were given opportunity to inspect the Northwest's newest equipment for safety and rescue work, when the Jay W. Stevens disaster service unit of the Portland fire department was brought to the mill at Oregon City. The demonstration was arranged by Carl Braun, vice president and mill manager, and Kenneth Urfer, safety supervisor.

In opening the demonstration, Mr. Braun made a talk in which he thanked R. E. Riley, Portland commissioner of finance, and Edward Grenfell, fire chief, on behalf of the Hawley management, for permitting the unit to be shown at the mill. Mayor Ben Harding was also present and spoke, as did Ed Brown, manager of the Oregon Safety Council.

Numerous Oregon City residents attended, many coming in the wake of the local fire department trucks which arrived with sirens going.

The Disaster Service Unit was of particular interest to the mill employees, because it would be available for service in event of serious accident at the mill. The equipment is to be used in any part of Oregon, Washington or Idaho.

The unit is the first of its kind ever built, and combines within one truck the results of many years of study and investigation. It is a streamlined car 29 feet 6 inches long, 9 feet 6 inches high and eight feet wide, equipped with hundreds of pieces of equipment, tools and machines that experience has taught to be useful in case of emergency. It was presented to Portland by Aaron M. Frank last March 15. The car carries a crew of six specially trained firemen on each shift and is always ready for call.

The car carries portable power plants for floodlighting a town or factory; long range public address system for directing rescue work; receiving and sending radio sets installed in smoke and gas helmets; constitutes a complete field hospital and ambulance with space to transport seven injured persons; is equipped to serve as a field kitchen, etc. There are more than 1200 different items carried for use in case of disaster.

After demonstrating the disaster car and its equipment, the Portland firemen on the unit were taken through the Hawley mill and shown the mysteries in the manufacture of pulp and paper.

Board Production Higher For First Quarter

● Production of paper board in mills in the United States in April totaled 372,984 net tons, according to the monthly report of the Census Bureau issued recently, compared with 421,576 tons produced in the month before and 303,073 tons in April last year. The April output brought the total for the first four months of the current year up to 1,456,757 tons, against 1,171,994 tons in the corresponding period last year, and 1,604,212 tons two years ago. Board mills produced at 69.1 per cent of rated capacity in April last, contrasted with 73.4 per cent in the month preceding and 58.7 per cent in the similar month last year.

New orders received by mills for board during April called for a total of 347,575 tons, against 429,545 tons in March this year and 302,921 tons in April last year. Unfilled orders held by mills at the end of April were for 97,340 tons, compared with 124,420 tons a month earlier, and 75,296 tons on the same date a year ago.

Board mills consumed a total of 262,918 tons of waste paper in April, comparing with 292,474 tons in the month preceding and 224,715 tons in April last year, making an aggregate for the first four months of this year of 1,036,413 tons against 886,757 in the same four months of 1938 and 1,271,870 tons in the first four months of 1937.

Stocks of waste paper at board mills were 255,354 tons at the end of April, against 248,595 tons a month before and 319,816 tons a year previously.

California-Oregon to Start Machines in July

● The California-Oregon Paper Mills is planning on starting up two or possibly three of the paper machines in the Los Angeles plant, right after the first of July. The machines have been in intermittent production for some time past.

The parchment paper machine there has been running steadily, and will continue on that basis.

Swedish Pulp Stocks

● At the close of 1938 the stocks of wood pulp at the mills in Sweden totaled 234,630 short tons of sulphite, 189,970 short tons of sulphate and 35,640 short tons of mechanical pulp, according to the report of the American Commercial Attache in Stockholm, Sweden.

HAWLEY MEN INSPECTING the latest in first aid equipment from the Portland Fire Department's new disaster service truck which appears in the background. In the lower picture BEN HARDING, Mayor of Oregon City, Oregon, speaks to the crowd over the public address system which is part of the truck's equipment, while CARL E. BRAUN, Vice-President and Mill Manager of the Hawley Pulp & Paper Company, stands at the left facing the camera.

Objectives in the Various Stages of Pulp Purification

by THOMAS E. MOFFITT*

A GREAT deal has been said, written and published on the subject of pulp bleaching. It has become common practice to refer to everything between the screen room at one end and the machine chests at the other as "the bleach plant". In recent years treatments supplementary to actual bleaching have been developed, but all stages of pulp purification subsequent to the cooking processes are still referred to as "bleaching". For the sake of clarity, let us relegate the term "bleaching" back to its true meaning and use the term "pulp purification" to express all phases of the matter. Each of the stages of pulp purification has a definite objective and any given combination of stages has an over-all objective. For the purpose of this discussion I want, first, to give a definition to the overall objective of pulp purification, and, second, to discuss what I believe to be the objective of each of the more commonly used purification stages.

In general, the overall objective is to separate from the cellulose the several impurities which still remain in the unbleached pulp, and to effect the separation with a minimum of attack on the cellulose itself. Some of the impurities in question are lignin, dyes, carbohydrates, residues from the digestion and iron. The extent to which the impurities are to be removed depends on the desired brightness of the bleached product and also on the specific properties that product is to possess. Of major importance, of course, is the fact that the objective is to be attained at a minimum unit cost.

Direct Chlorination

The trend in recent years has been toward the use of direct chlorination as the first purifying stage. The major objective in this stage is the removal of lignin. The practical methods of brightening a pulp involve, to a greater or lesser degree, decomposition of the lignin. It is desirable, therefore, to remove lignin in a separate reaction under conditions that can be made largely specific for that purpose. By so doing subsequent bleaching reactions can be less drastic with less attack on the cellulose.

When chlorine acts as a chlorinating agent it is highly specific for the lignin, but when it acts as an oxidizing agent it attacks both lignin and cellulose. At a pH of 2.0 or less chlorine acts primarily as a chlorinating agent and little or no oxidization occurs. It is desirable, therefore, to reach a pH of 2.0 as promptly as possible, and that is best accomplished by very rapid addition of chlorine to pulp. If the chlorine is added slowly a large part of the chlorinating period is carried out at a relatively high pH. This is especially true in the case of kraft pulp which is alkaline in the unbleached state. Continuous chlorination provides an almost immediate establishment of a low pH.

If chlorine is left in contact with the pulp after all chlorinatable material has been completely chlorinated, oxidation of the cellulose will occur. The rate of oxidation at a pH of 2.0 or less is very slow, but it is safer to permit oxidation only at a pH above 7.5 or 8.0. When chlorination has proceeded to an economic and useful limit, the residual chlorine may be washed out or it may be converted to calcium hypochlorite by the addition of milk of lime. In the case of sulphite pulp the ratio of chlorine to pulp is usually such that the chlorine is nearly exhausted within a reasonable length of time. The addition of milk of lime thereafter performs no useful function except to prevent corrosion of unprotected washing equipment. In the case of kraft pulp, however, a high ratio of chlorine to pulp is used, and the economics of the matter require the conversion of residual chlorine to calcium hypochlorite by the addition of milk of lime after the major part of the chlorination reaction has been completed. The pH is thereby raised to 7.5 or 8.0 and oxidation can proceed under safe conditions.

THOMAS E. MOFFITT,
Chemical Engineer,
Hooker Electrochemical Co.

While the ultimate objective of chlorination is the removal of lignin, the immediate objective may be, to some degree, a conversion of the lignin to substances which can be rendered soluble by some subsequent reactions. Some of the chlorinated products are soluble in water and can be removed readily by washing. Other products require the presence of an alkali to make them readily soluble in water. Still others seem to require a subsequent oxidation to transform them into water soluble materials.

Caustic Extraction

Another relatively new process in pulp purification is known as Caustic Soda Extraction. This process has several objectives, and the degree to which they are set up or attained is dependent on the brightness and character of the desired product. One objective is to further the solubilizing of chlorinated residues which have not been removed in previous steps in the purification processes. The treatment frequently takes the form of a cold neutralization of the acid residues followed by a rewash—perhaps with an intermediate soaking period. Another objective, and one of the principal objectives in the production of strong, high-white kraft pulp, is the solubilizing of certain brown dyes which are presumably of the phlobotannin

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type. Oxidation removes a large part of the color of these dyes, but to remove the last yellowish tint the degree of oxidation must be so great that the cellulose is seriously degraded. Following treatment with hot caustic soda the dyes can be removed with persistent and painstaking washing. A soaking period in fresh water between two thorough washings permits diffusion of the solubilized dyes from within the fiber structure.

Having removed the dyes under conditions which do not harm the cellulose, the subsequent bleaching reaction can be performed under conditions which preserve the fiber strength and still result in the desired degree of brightness.

● The higher the temperature and the greater the concentration of caustic soda, the more rapid and complete is the removal of the dyes. If these conditions are too drastic, however, the reaction is not limited to the removal of the dyes and chlorinated residues, but is extended to the solubilizing of some of the beta and gamma celluloses. The results then are an increased loss in yield, an increased alpha content, and a modification of the paper making characteristics of the fibers. The modification of the product may or may not be desired. If it is, a third objective of the caustic soda stage is to increase the alpha cellulose content of the pulp. For certain paper making grades this may be desirable as a means of increasing softness and opacity and of ensuring a paper of greater permanence. It may also be desired for pulps of the so-called dissolving grades. In the case of kraft products the caustic extraction has, for the most part, been conducted so as to avoid the attainment of this objective—that is, so as to avoid the excessive loss of yield which it involves. The same is true of sulphite pulps of paper making grades. The objective has become prominent only for sulphite pulps of dissolving grades.

Bleaching

Bleaching has for its objective the increase in brightness of pulp by means of the whitening effect. For all chemical wood pulps bleaching is an oxidation reaction and should be limited, as far as possible, to the conversion to colorless or readily soluble products of only such coloring matter which cannot be removed more specifically by other means. Chlorine in the form of a hypochlorite is the agent usually used. The conditions under which it reacts must be carefully selected and controlled. Otherwise the cellulose as well as the impurities will be attacked and degraded.

Chlorine at a pH below 2.0 tends toward chlorination in its reactions. As the pH increases above 2.0 the tendency toward chlorination decreases and the tendency toward oxidation increases. At a pH of about 5.0 the oxidation tendency is so strong that it is difficult to control the rates of reaction to a sufficient degree to make its attack specific for the impurities. As the pH is raised above 5.0 the rate of oxidation is decreased. Above 7.5 or 8.0 the reaction is limited chiefly to oxidation and at a rate that can practically be controlled for removal of impurities. If the pH is too high, however, the rate of oxidation is so slow and the period so long that undesirable results are obtained.

● The rate of oxidation increases with the concentration of the oxidant. Consequently, high concentrations should be avoided, and can be avoided best by previous removal, to as great an extent as possible, of impurities by a series of reactions specific to them. The oxidizing reactions of the bleaching stages may then be carried out under the mild conditions which are necessary for the production of high-strength, high-brightness pulps.

Acid Treatment

After the final bleaching and the washing which follows it, it has become customary to add to the pulp suspension a chemical which will reduce the pH to 6.8 or 6.9, which is slightly acid. The objective in so doing is to assist the removal, by soaking and subsequent rewashing, of reaction products which are difficult to remove while the pulp is in an alkaline condition. The oxidizing bleaching reactions are, for reasons previously given, carried on under mildly alkaline conditions, that is above pH 7.5 or 8.0. In order to reduce the pH to below 7.0 after the bleached pulp is washed, an acid must be added. The normal impurities which are still in the pulp behave as an indicator to acids and alkalies. At a pH slightly below 7.0 these impurities lose much of their color but regain it at the higher pH values. Also, at a pH below 7.0 impurities can more readily be removed by washing. Maintenance of the lower pH value, therefore, ensures a more complete removal of impurities and also a greater degree of brightness of such portion of the impurity which may escape removal.

● If the acid used to adjust the pH possesses reducing properties, as for example sulphurous acid or oxalic acid, it may perform two other functions important to the attainment of the objective. First, it acts as an anti-chlor to render harmless any active chlorine which may have escaped removal by washing; and, second, it tends to reduce any iron present in the pulp from the ferric to the ferrous condition. In the ferrous condition the iron can be fairly readily washed out of the pulp. In the ferric condition it is strongly absorbed onto the fibers. The presence of iron will give the pulp a yellowish tint and may catalyze the degradation of the cellulose with consequent loss in strength. These reactions may occur when the pulp or paper is dried or left in storage.

Soaking pulp in fresh water for some specified period of time has as an objective the providing of opportunity for the soluble impurities located within the fiber walls or absorbed on the cellulose to diffuse out of the walls and into the surrounding water. Modern methods of washing on vacuum type filters permit good removal of impurities from around the fibers but do not provide the time essential to diffusion of the impurities from inside the fiber substance. A soaking period is effective, therefore, provided it is placed between two washes.

● The soaking period is especially important following the caustic soda extraction stage. The dyes are difficult to remove by reason of their slight solubility and the residual alkali is difficult to separate from the fibers. If the dye is incompletely removed the pulp will be slightly yellow or the strength will be impaired by an effort to force the bleaching reactions. If the alkali is completely removed the fibers may be so alkaline that the rate of reduction in the subsequent bleaching stage is unduly retarded.

● The soaking period is equally important in connection with the adjustment of pH after the final bleaching. The permanence of the brightness of the pulp is in large measure dependent on a complete removal of impurities. This final soak and rewash contributes greatly to the attainment of this objective.

Other treatments for pulp purification have been proposed, and some of them have been established in operating mills. In general, however, chlorination, caustic soda ex-

traction, hypochlorite bleaching, intermediate soaking and rewashing, and adjustment of pH after the final bleaching constitute the commonly practiced pulp purification processes. The sequence of stages and the number of subdivisions of any individual type of process are matters to be determined by studies of overall objectives of individual mills, and are not proper subjects for this discussion.

Newsprint 16 Inches and Up Is Duty Free

● The U. S. Treasury Department has advised publishers that all newsprint paper in rolls sixteen inches or more in width may be imported duty free.

The commonly used widths of newsprint were on the free list but to eliminate the "red tape" involved in the occasional importation of certain widths, the Treasury changed its regulations to define "standard newsprint" as any newsprint sixteen or more inches wide.

Powell River Signs New Working Agreement

● The new agreement between Powell River Company and its employees has been drawn up and made effective. It was read to a joint meeting of the Pulp, Sulphite and Paper Mill Workers and the International Brotherhood of Paper Makers at Powell River May 1.

There were no drastic changes from the old agreement, but the main item was a union membership retention clause which makes the plant virtually a union shop. This means that any employee who has held membership in either local must keep up that membership.

Three hundred and sixty-eight classifications of jobs were reviewed, the majority of which gave increases in wages ranging from one to fifteen cents an hour, with an average increase of a little more than two cents. The basic rate remained at 54 cents.

The agreement between Powell River Company and Pacific Mills employees at Ocean Falls is the only one that has been opened in the paper industry on the Pacific coast and possibly will be the only one opened in Canada this year.

India Revises Pulp Tariffs for Protection

● The American Trade Commissioner at Calcutta, India, reports that a bill was recently passed by the Indian Assembly with amendments revising the new duty on wood pulp from a revenue to a protective duty effective until March 31st, 1942.

The new bill fixed the tariff rate at 25 per cent ad valorem or 35 ruppes per ton, whichever is higher. The measure is designed to provide protection for the domestic paper industry in case of a drastic fall in prices of imported wood pulp.

The same bill passed the Council of State and another amendment was made by the government revising the protective rates on paper to 25 per cent ad valorem or 30 rupees per ton.

Grant Farmer Announces Marriage In October 1937

● When is news almost two years old news? Answer: When Grant Farmer, superintendent, and Vivien Jones, plant nurse, of Fibreboard Products, Inc., Vernon Division, are secretly married in October, 1937, and the event, kept a secret during the intervening months, is announced in June, 1939.

THE CROWN ZELLERBACH CORPORATION'S exhibit at the Golden Gate International Exposition on Treasure Island in San Francisco Bay, is a most interesting dramatization of the importance of paper ' ' ' Murals show the various steps in the manufacture of paper from logging to the finished product ' ' ' Under the murals are a series of ten dioramas which depict on one side paper's part in history, and on the other paper's part today ' ' ' The historical events in which paper played an important part are the signing of the Magna Charta; Gutenberg printing the Bible; the signing of the Declaration of Independence; the writing of the Emancipation Proclamation; and the signing of the Armistice ' ' ' Depicting paper's part today are scenes showing paper's part in sanitation; in business; in the home; in packaging; and in the arts ' ' ' On the stand in front of the murals and dioramas is a case containing samples of raw materials and semi-finished products showing the various steps in producing paper; a log unbarked; a barked log, chips, pulp as it comes from the digesters; bleached pulp; and colored stock ready for the paper machines.

TAPPI Holds May Dinner In Vancouver

● The seventh and last Dinner Meeting of the 1938-1939 series sponsored by the Pacific Section of TAPPI, was held at the Terminal City Club in Vancouver, B. C., the evening of May 6th.

Harry Andrews, control superintendent of the Powell River Company, served as chairman and introduced the speakers. A. E. Baker, purchasing agent of the British Columbia Pulp & Paper Company, and W. C. Grieve, manager of the mechanical goods division of the Goodyear Tire & Rubber Co., Ltd., made all arrangements for the dinner meeting which was attended by around seventy men.

The papers were arranged for by Andreas Christensen, technical adviser of the British Columbia Pulp & Paper Company. Mr. Christensen was unable to be present as business called him into the Middle West during April.

The first speaker was C. V. Orchard, assistant chief forester of the British Columbia Forestry Department. Mr. Orchard's talk was titled, "Some Aspects of Forest Administration in Relation to the Pulp and Paper Industry."

A. H. Lundberg of Seattle presented the second paper entitled, "The Production of Sulphur Dioxide Gas by Flash Roasting," which had been prepared by Harold O. Goddard of the Nichols Enginerring & Research Corporation of Canada.

Both Mr. Orchard's and Mr. Goddard's papers will be published in early issues of this journal.

Following the talks the Weyerhaeuser Timber Company's interesting talking moving picture, "Trees and Men," was exhibited for the first time in British Columbia.

Prior to the papers Bill Carr of Vancouver sang several songs and offered a burlesque of a radio announcer broadcasting the news. He also led the group in singing.

At the speaker's table with Mr. Andrews were R. C. Onkels, superintendent of the Westminster Paper Company, and John Ashby, chief chemist of the same company; Lawrence Killam, president of the British Columbia Pulp & Paper Company; G. S. Brazeau, manager, Everett Mill, Pulp Division, Weyerhaeuser Timber Company and a member of the national executive committee of TAPPI; N. W. Coster, chairman of the Pacific Section of TAPPI and technical director of the Soundview Pulp Company, Everett, Washington; C. V. Orchard, assistant chief forester of the British Columbia Forestry Department; A. H. Lundberg of Nichols Engineering & Research Corporation, Seattle; and Fred Shaneman, secretary-treasurer of the Pacific Section of TAPPI and manager of the Pennsylvania Salt Manufacturing Company of Washingfiton at Tacoma.

The following is a list of those attending the Vancouver meeting on May 6th:

● W. A. Anderson, Vancouver, B. C.; I. H. Andrews, Powell River Co., Ltd., Powell River, B. C.; G. W. Allan, Canadian Sumner Iron Works, Vancouver, B. C.; John Ashby Westminster Paper Co., New Westminster, B. C.; William A. Bain, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; D. H. Baker, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; Iver E. Belsvig, St. Regis Kraft Co., Tacoma; Emil Berger, St. Regis Kraft Co., Tacoma.

L. K. Bickell, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; G. S. Brazeau, Pulp Division, Weyerhaeuser Timber Co., Everett; Roscoe M. Brown, Forest Products Laboratory, University of British Columbia, Vancouver, B. C.; A. M. Buck, Pulp Division, Weyerhaeuser Timber Co., Everett; G. H. Budkin, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; D. M. Campbell, Dominion Rubber Co., Vancouver, B. C.; A. M. Cadigan, St. Regis Kraft Co., Tacoma; Sidney M. Collier, Puget Sound Pulp & Timber Co., Bellingham.

N. W. Coster, Soundview Pulp Co., Everett; T. H. Crosby, Canadian Westinghouse Mfg. & Electric Co., Vancouver, B. C.; Donald C. Brothers, Canadian Ingersoll-Rand Co., Vancouver, B. C.; George Dickson, Stetson-Ross Machine Co., Seattle; G. S. Eldridge, Vancouver, B. C.; E. Wnnevaara, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; E. O. Ericsson, Puget Sound Pulp & Timber Co., Bellingham; A. F. Frattinger, Canadian Allis-Chalmers Co., Vancouver B. C.

● W. C. Grieve, Goodyear Tire & Rubber Co., Ltd., Vancouver, B. C.; F. J. Hamilton, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; K. L. Howe, Westinghouse Electric & Mfg. Co., Seattle; G. D. Humphrey, B. C. Pulp & Paper Co., Ltd., Vancouver, B. C.; A. B. Hunter, McLennan McFeeley & Prior, Ltd., Vancouver, B. C.; W. G. Ivanson, Salmon River Logging Co., Ltd., Vancouver, B. C.; Walter Johnson, Crane, Ltd.; Vancouver, B. C.; S. A. Kaaten, Sydney, Australia; L. C. Kelley, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; Blain L. Kerns, Westinghouse Electric & Mfg. Co., Seattle.

L. Killam, B. C. Pulp & Paper Co., Ltd., Vancouver, B. C.; Robert M. Kuhn, St. Regis Kraft Co., Tacoma; Norman A. Lewthwaite, National Paper Products Co., Division Crown Zellerbach Corp., Port Townsend; A. H. Lundberg, Nichols Engineering & Research Corp., Seattle; F. W. MacNeill, Canadian General Electric Co., Vancouver, B. C.; J. Graham MacDonald, National Machinery Co., Vancouver, B. C.; C. C. Macdonell, B. C. Pulp & Paper Co., Ltd., Woodfibre, B. C.; Wm. Mackay, Wilkinson Co., Ltd., Vancouver, B. C.; Hugh E. Miller, Simonds Canada Saw Co., Ltd., Vancouver, B. C.; J. G. G. Morgan, Vancouver, B. C.; G. Myers, Pacific Coast Pipe Co., Vancouver, B. C.

● Fred Nicholson, Stetson-Ross Machine Co., Seattle; A. F. Nicolai, Vancouver, B. C.; E. A. Norton, Pulp Division, Weyersaeuser Timber Co,. Everett; R. C. Onkels, Westminster Paper Co., Ltd., New Westminster, B. C.; C. D. Orchard, B. C. Forest Service, Victoria, B. C.; R. S. Parry, Vancouver, B. C.; J. W. Peckham, The Bristol Co., Seattle; C. R. Rigby, Vancouver, B. C.; W. T. Roberts, Goodyear Tire & Rubber Co., Seattle; Fred Rowlands, Vancouver, B. C.; Harlan Scott, Pacific Pulp & Paper Industry, Seattle.

Fred Shaneman, Pennsylvania Salt Mfg. Co. of Washington, Tacoma; P. S. Simcoe, National Paper Products Co., Division Crown Zellerbach Corp., Port Townsend; P. F. Skoog, Puget Sound Pulp & Timber Co., Bellingham; Lawrence K. Smith, Pacific Pulp & Paper Industry, Seattle; William Smith, Vancouver, B. C.; F. J. Sparks, Marshall Wells, Ltd., Vancouver, B. C.; A. R. Webb, Pacific Mills, Ltd., Vancouver, B. C.; W. A. Webb, Vancouver Island Coals, Ltd., Vancouver, B. C.; Norman A. White, McLennan, McFeely & Prior, Ltd., Vancouver, B. C.; J. D. Whittaker, Gutta Percha & Rubber Co., Vancouver, B. C.;C. H. E. Williams, Vancouver, B. C.

Sidney Collier Joins TAPPI

● Sidney Collier, shift foreman at the Bellingham unbleached sulphite pulp mill of the Puget Sound Pulp & Timber Company, recently became an active member of national TAPPI.

Mr. Collier has had extensive experience in operating positions in the Pacific Coast sulphite pulp industry.

New Storage Building at Camas

● The Crown Willamette Paper Company will construct at the Camas mill a new bag and bag-roll storage building. It will be built between the bag factory and the present bag warehouse, connecting the two. It will be 42 feet wide and 224 feet long, four stories in height.

Rex Gault Awarded Twenty-Year Pin

● Early this month Rex Gault, manager of the Western Transportation Co., Crown Zellerbach shipping subsidiary, received from Vice President Frank N. Youngman his 20-year service pin. Mr. Gault came with the company shortly after the war and has been in its service ever since.

In noting the award of this service pin, it might be mentioned Mr. Gault holds other outstanding tokens of recognition of services. He is one of the few men who hold the Congressional Medal of Honor, received for service in the U. S. Navy during the World War.

Camas Golf Tournament

● The Crown Willamette Golf Association wound up the spring tournament with the final round on June 8. The contest started April 28 with 84 entries, and had five rounds.

The winners and runers-up, respectively, were: first flight, Ed Bartkowski and Jack Britton; second flight, Cliff Odoms and Andrew Catto; third flight, Dale Olds and George Charters (still to play off for position); fourth flight, Vincent Ross and Harold Stenehjem; fifth flight, Tom Stenehjem and Ken Branstiter.

At the conclusion of the match, a banquet was held, at which George Charters presented the trophies.

Mitchell Thom Attends Tacoma Meeting

● Mitchell Thom, superitendent of the Sidney Roofing and Paper Company, Ltd., Victoria, B. C., attended his first convention in the United States when with Mrs. Thom he journeyed to Tacoma for the joint meeting of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association and the Pacific Section of TAPPI on June 2nd and 3rd.

Ramstads Attend Convention on Honeymoon

● The joint meeting of the Coast Superintendents and of TAPPI at Tacoma, June 2nd and 3rd, might be called part of Mr. and Mrs. Carl A. Ramstad's honeymoon as they were married a month ago in Everett.

Mr. Ramstad is in charge of instrumentation for the Soundview Pulp Company. Before her marriage Mrs. Ramstad was June McGhee of the Soundview office staff.

Westminster Paper Reports Best Year

• In favorable contrast to other pulp and paper companies operating in British Columbia which suffered from collapse of Oriental and other markets. Westminster Paper Company, with plant in New Westminster, has reported the best year in its corporate history for the period ending January 31, 1938.

Earnings were at a new peak level at $1.84 a share compared with 62 cents in the twelve-month period ending July 31, 1937, and with 48 cents in the half year ended January 1, 1938.

During the year under review, in addition to providing $70,910 for capital improvements including a three-story addition to the plant, the company added $14,620 to sinking fund and increased net current and working assets by $44,-918.

The report shows sales for the year totalling $1,036,542. Gross profit after deduction of $14,833 for discounts and allowances and $739,140 for cost of sales, was $282,569.

Selling and adminstrative expenses amounted to $99,760, leaving a profit of $182,808 before providing for depreciation, interest on debentures and income taxes.

The statement makes provision of $62,-338 for depreciation; debenture interest requirements $8,025; income taxes, $34,-500, leaving a net profit of $87,946.

The capital assets, after adding $70,-910 for the plant addition, are shown at $771,220 from which is deducted depreciation reserve of $286,076 to leave a balance sheet figure of $485,144. Patents and trade marks are carried at a valuation of $75,292. The company's investment in the Pacific Coast Paper Mills, Bellingham, is carried on the books at $6,275.

Against outstanding 6½ per cent first mortgage debentures due in 1950 or $204,500 the sinking fund holds $91,-500 in debentures and $3,093 in cash, compared with $74,500 debentures and $5,473 one year earlier. Net debentures debt accordingly is $110,307.

Current and working assets, increased during the year from $254,714 to $288,-199 while current liabilities declined from $132,449 to $121,017 in the same period. This resulted in an increase of $44,-918 in net current assets, bringing the figure at January 31, 1939, to $167,182.

From net profit for the year of $87,-946 there was a balance of $75,999 to add to earned surplus after deduction of $11,947 for dividends. This brought surplus to $117,169. While two semi-annual payments of 25 cents each were paid during the fiscal year, one of these was provided for in earnings for the preceding half year with the result that only one 25 cent distribution was deducted from earnings in the year ending January 31, 1939.

The statement shows inventories lower at $100,207 against $122,693 a year previously. Bills and accounts receivable after reserve of $3,920 were $156,-156 against $88,984. Other current assets at the end of the fiscal year were: Cash surrender value life insurance, $20,-951 against $19,994; accrued interest on sinking fund debentures, $2,031 against $1,636; cash, $8,854 against $21,347.

Trade accounts payable at $68,333 compared with $93,353 one year earlier. This and the larger reserve for income taxes due to change in the fiscal year and the provision of $11,947 for a semi-annual dividend in the statement of January 31, 1938, accounted for the reduction in current liabilities which were $121,017 at January 31 this year, compared with $132,449 a year previously.

Onkels and Herb Named Westminster Directors

• R. C. Onkels, mill superintendent at the New Westminster plant, has been elected a director of Westminster Paper Company.

Another new director is P. J. Herb, sales manager of Pacific Coast Paper Company, Bellingham subsidiary of Westminster Paper Company.

The two new directors replace Frederick Smith and Francis Wright, who have resigned.

Christensen Working In Middle West

Andreas Christensen, technical adviser of the British Columbia Pulp & Paper Company, left Vancouver, B. C., April 18th for several months special work in the Middle West, having been granted a leave of absence by the company.

Mr. Christensen is working with several mills where Fibre Making Process sulphite circulating systems have recently been installed. Mr. Christensen helped develop this method of acid circulation.

While in the Middle West, Mr. Christensen will visit a number of the British Columbia Pulp & Paper Company's mill customers. He expects to return to the Pacific Coast the latter part of July.

Westminster Paper Declares Dividends

• Directors of Westminster Paper Company, New Westminster, have declared a dividend of 5 per cent on the common stock for the current year, payable May 1 and November 1.

Record dates are April 15 and October 15, respectively.

Austrailian Visits Coast Mills

• S. A. Kaaten, representative of overseas paper mills, whose home is in Sydney, New South Wales, was a Pacific Coast visitor early in May. Mr. Kaaten was interested in making connections with Coast paper mills desiring to export to Australia. While on the Coast Mr. Kaaten attended the TAPPI Dinner Meeting in Vancouver, B. C., on May 6th.

Albany Felt Company Holds Dinner in Shelton

• The Albany Felt Company of Albany, New York, exhibited its talking motion picture, "The Art of Felt Making," at a dinner at Shelton, Washington, on April 18th.

Approximately fifty men of the Rayonier Incorporated organization at Shelton were guests and participated in a long and interesting discussion on the application and use of felts following the showing of the picture. Harry H. Stilwell, the Albany Felt Company's Pacific Coast representative, arranged for the dinner and the exhibiting of the interesting and instructive motion picture.

Canada Sets Minimum Prices On Imported Pulp

• Effective April 13th, 1939, the Department of National Revenue, Ottawa, Canada, made effective the following minimum values, in Canadian Funds, for entry purposes, on Woodpulp of European origin, per ton of 2,000 lbs. air dry weight f.o.b. point of production:

Unbleached Sulphate (Kraft) Woodpulp	$36.00
Bleached Sulphate (Kraft) Woodpulp	50.00
Unbleached Sulphite Woodpulp	36.00
Bleached Sulphite Woodpulp	46.00
Bleached Soda Woodpulp	46.00

When shipments move to Canada from an intermediate point, all charges from point of production are to be added in determining values for entry purposes. Any woodpulp shipped on consignment without sale prior to shipment will be subject to the same regulations.

If the sales value of woodpulp imported is below the minimum values that have been set, such importations will be subjcet to dumping duties equal to the difference between the selling price and the minimum values for import that have been established. It is to be noted that these regulations do not apply to woodpulp of United States origin.

Forest Products Research In the Pulping of Western Woods

by Dr. C. E. CURRAN*

THE Forest Products Laboratory is a division of the U. S. Department of Agriculture desisgnated to conduct research in wood utilization. Its outlook is strictly national and the program is designed to meet the forest utilization needs of all sections of the country.

One of the important lines of work at the Laboratory is research in pulp and paper. Many years of experience has resulted in a clear picture of objectives which can be best presented in outline form as follows:

1. Fundamental work
   - A. Improved methods for evaluating:
     - a. Paper products relative to their use
     - b. Pulps and stuffs relative to paper products
     - c. Pulpwoods relative to pulps
     - d. Lands and forests relative to pulpwood
   - B. Increased knowledge of the effects of:
     - a. Machine variables
     - b. Fiber-processing variables
     - c. Pulping variables
     - d. Land and forest variables
2. Applied work
   - A. Improved and increased utilization of:
     - a. Particular species
     - b. Pulpwood at the mill
     - c. Waste

In setting up an actual working program in harmony with these objectives, and at the same time taking cognizance of regional or currently important problems, the annual working plan in pulp and paper research is divided into five sections:

1. Studies of specific regional species
2. Studies of pulping processes
3. Studies of pulp processing (bleaching, beating, etc.)
4. Paper making and finishing
5. Miscellaneous pulp and paper mill waste investigations

While recognizing the special interest which regional groups have in the pulpwoods of their particular section, the information of greatest real value often derives from the more fundamental lines of work. Furthermore, data resulting from studies of the species of one region are often of high value in solving the problems of another region.

In discussing the subject "Forest Products Research in the Pulping of Western Woods" I may, therefore, apparently wander over a rather wide geographical forest area, but only in an attempt to emphasize my main point.

The first step in developing pulping data on any species is an evaluation of its chemical and physical properties. Western pulp woods or potential pulpwoods are more or less distinctive in this respect. Generally speaking they are longer fibered than eastern or southern woods and their fiber walls are somewhat thicker. This requires a somewhat different handling in the paper making process, which fact is sometimes overlooked. So far as strength properties are concerned this additional fiber length has little significance excepting in the factor of tearing strength. Long fibered woods usually possess an advantage in tear.

In such chemical characteristics as cellulose, alpha cellulose, lignin, etc., all the major western species rank favorably with woods from other regions. One disadvantage, particularly with Western hemlock, is the presence of a rather large amount of highly colored extractives which are sometimes difficult to remove in bleaching. Douglar fir, also, presents a problem in this respect.

Variability of Species and Within Species

In considering the physical and chemical properties of wood, the variability of species and within species needs always to be kept in mind. Everyone knows, for example, that white fir generally runs lighter in weight than hemlock. This is a typical species variation. But what is not so generally recognized is the wide variation which may occur within a single species. Recent research in this connection has shown that widely divergent properties, due to differences in growth conditions, may exist not only in trees of the same species but even within a single tree.

For many years certain European mills have recognized such variability as a factor in pulping quality. The same species from different areas are segregated and used for different processes, or in different grades of pulp. This is, of course, the simplest case of growth condition effect, but even so it has received but scant attention in the United States. Here, "wood is wood!" and usually the pulp maker can "take it or leave it," "like it or lump it."

● However, in our work with southern woods certain data have been compiled which cannot be disregarded. For example, a single southern pine species from one area has shown extremely wide variation between trees in heartwood and sapwood content, in springwood and summerwood fiber content, in presence or absence of compression fiber, in extractive contents, etc.

The significance of these differences is in their reaction to the pulping process, and the widely variant character of the fibers—which is reflected in the pulp and paper made from them. For example, pine sapwood reduces readily by the sulphite process; pine heartwood can hardly be pulped at all by this method. In the case of the groundwood process, sapwood particularly from young trees, reduces readily and has possibilities for newsprint and similar pulp grades; heartwood, on the other hand, while it can be defibered without difficulty, is usually too dark colored to produce a quality pulp and the high pitch content of heartwood is a potential operating difficulty. Hence, any application of these processes to southern pine appears to involve a selection of young heart-free material.

For this reason, presumably, nearly all southern mills use the sulphate pulping process and even the new newsprint mill now building at Lufkin, Texas, will select pine for grinding and use semi-bleached kraft for the chemical component of its furnish. Fortunately the presence of heartwood is no disadvantage where an alkaline liquor is used, and the alkali also effectively dissolves and eliminates resins, etc.

However, the difference between springwood and summerwood fibers presents a new contingency. The

*Chief, Division of Pulp and Paper, United States Forest Products Laboratory, Madison, Wisconsin. Presented at the Joint Meeting of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association and the Pacific Section of TAPPI, Tacoma, Washington, June 3rd, 1939.

springwood fibers are thin walled and flexible. On processing (beating) after pulping they tend to collapse to flat, ribbon-like fibers which form up well on the machine wire and produce compast, even-textured sheets of relatively smooth, dense surface, such as desired for good printing. Summerwood fibers are thick-walled and stiff. They resist processing and tend to form coarse, rough-textured porous papers. Generally speaking springwood fibers tend to give pulps of somewhat higher bursting and folding strength; summerwood fibers usually excel in tear. Obviously, it is impractical (at least for the present) to separate these fibers but there is possibility of selecting or segregating wood in which one or the other type predominates. As a matter of fact such selection is already being practiced to a limited extent in producing certain specialty papers.

Springwood is usually predominant in western and northern species. This has given them a certain advantage in the so-called "higher grade" paper markets. However, variation in the springwood—summerwood ratio exists also in these species. Butt logs, for example, consistently run a higher summerwood content than the top logs of the same tree—enough so that differences in the sheets made from top log and butt log fibers will be easily discernible. Hence, a selection on this basis is a practicable possibility.

This all sounds complicated, and it is complicated. Perhaps such observations are years ahead of general acceptance, but the information is fundamental, and whether you like it or not will one day be turned to practical use.

● Another complication is compression fiber. Such fibers are formed due to some stress or abnormal condition during growth. Very rapidly grown wood frequently has a high proportion of compression wood. Such fibers are brash or brittle, are high in lignin and of low cellulose content. They are almost totally useless for pulp, for lumber or for any use except possibly fuel. Futhermore, the wood immediately adjacent to compression areas is often a transitional form possessing some of the same undesirable proprties. Western species often show evidences of compression wood. Douglas fir is occasionally a serious offender in this respect.

Developing New and Modified Processes

Variations in properties between species, as well as within species requires specialized studies of the pulping processes. In acid pulping such factors as the ratios of free and combined acid, total quantity used, penetration period temperature schedule, etc., must be adapted to each species separately; in alkaline pulping chemical concentrations, ratios of caustic to sulphide, temperature, etc., have a bearing. Even new processes, or modification of old processes may need to be developed. A considerable proportion of the work of the Forest Products Laboratory is along this line. So far as the writer is aware the first systematic study of sulphite pulping variables made in this country was at Madison and the principles developed in this work are being daily applied in mills throughout the country. The semi-chemical process was developed for producing high yield pulps from hardwoods.

Douglas Fir Has Possibilities

A low concentration alkaline process and multiple stage cooking have been used successfully for bleachable fir pulps. The neutral sulphite processes have been explored. It is these fields of investigation which offer promise of better utilization in the pulping both of woods now used and for the little used species.

● Douglas fir may be consdered in the latter class. It is the big utilization problem in this region right now. Pulp men may not agree with this. They are apt to see only the problems of the species they are using at the moment. But more effective use of Douglas fir for pulp is or will eventually be the major problem. Everybody knows that Douglas fir has been used for certain pulp grades for many years. Everybody is aware of certain short-comings which it possesses; also that almost any method which produces a passable pulp from Douglas fir produces a better pulp from hemlock or spruce. Just the same hemlock is not specially reserved for pulp. It's a really good lumber species. Eventually that fact is going to sink in and hemlock won't be the ugly duckling of the saw mills that it has been heretofore. Even today the lumber operators frequently feel they are acting a fairy god-father to the pulp mills through the cheap hemlock in the log market—and maybe they are.

Douglas fir has distinct pulping possibilities. First there needs to be some selection for use, according to growth condition, as already mentioned. Then a pulping procedure to get the most out of it. Young Douglas fir can be pulped by the sulphite process. You may recall a bleached mimeograph paper which the Pacific Pulp & Paper Industry included in one of last summer's issues (August, 1938). Young Douglast fir and a straight sulphite cook produced it, plus a little ingenuity in shortening the fibers by using very small chips.

Soda, Ammonia and Magnesia Bases

The substitution of soda or ammonia or magnesia bases in sulphite pulp liquors somewhat improves the quality of Douglas fir pulps—largely through improved penetration. In sulphate pulping low liquor concentrations, with chemical ratios maintained as high as practicable, yield relatively strong and quite easy bleaching pulps. The use of neutral sulphite liquors, frequently with buffers such as sodium sulphide and caustic, produce quite strong pulps from fir, although yields are lower than might be desired. All of these things, and strict attention to the elemental factor of pentration, time and temperature will do much to bring Douglas fir into its place in the pulping sun. During the next

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"Quality is Economy"

STEBBINS *Linings*

ACID RESISTANT LININGS

FOR EVERY PULP and PAPER MILL APPLICATION

Stebbins Engineering Corporation

Textile Tower • SEATTLE

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year a number of publications on various phases of pulping Douglas fir are scheduled to be published by our laboratory.

Also we have available data on the true firs and Western hemlock, or Sitka spruce, etc., either in published form or file reports which can be had for the asking.

There are two other fields of work listed in the major objectives, namely, pulp processing and paper making. These fields remain largely among the "arts" rather than the sciences of the paper industry. We are, however, developing consistently toward a better understanding of this basic field. In bleaching, for example, we many years ago compiled data on effects of temperature, consistence, multiple stage, chlorination, etc. With many other agencies in this field this work is not being pressed, but factors more fundamental to hydration and fiber treatment are being examined. In conjunction with these studies we have an experimental paper machine equipped with as many controls as financial limitations will permit us to buy. More than a hundred variables of machine operation have been delineated, many of which are extremely significant.

In fact this field of modification of fiber properties and in the mechanics of their formation offers one of the greatest opportunities for a more effective utilization of western species. Difficulties frequently experienced in the hydration of such pulps, in sheet formation and such factors, are being slowly but quite surely overcome. Inherent characteristics of western species, such as, unexcelled fiber length, excellent absorbent properties, high alpha cellulose content, possibilties of property modification through chemical treatments after pulping and bleaching are being recognized and advantage being taken of them. It is here that a lot of so-called "spade work" in research can be done in entrenching an already strongly placed pulping industry.

Imports of Pulp and Paper Rise in First Quarter

● Imports of paper and paperboard into the United States in the first quarter of 1939 totalled 532,000 tons compared with 476,578 tons in the first quarter of 1938, the Forest Products Division, Department of Commerce reported recently.

Newsprint paper accounted for 97 per cent of the total paper imports in both quarterly periods.

Imports of paper and paperboard in March totalled 196,000 tons as compared with 157,432 tons in March, 1938, statistics show.

Wood pulp imports totalled 416,000 tons in the first quarter of 1939. This was an increase of 12 per cent compared with imports in the first quarter of 1938 but were less than imports during the first quarter of 1936 and 1937. Imports of wood pulp in March totalled 135,000 tons.

Exports of paper and paperboard for the first quarter of 1939 totalled 62,000 tons, or approximately 5 per cent larger than the volume exported in the first quarter of 1938 and 10 per cent larger than the first three months of 1937.

Wood pulp exports in the first quarter of 1939 totalled 17,700 tons. This was substantially lower than exports of this product in comparable periods of previous years. The decrease in these exports was attributed almost entirely to reduced purchases by Japan, according to the Department of Commerce.

Four Months Pulp Exports Down 61% From 1938 Totals

● Exports of wood pulp from the United States in the first four months of the current year amounted to 22,742 short tons as compared with 58,676 short tons exported in the first four months of 1938. The decline was 35,934 short tons or 61.2 per cent.

Exports of wood pulp from the United States in April continued on the down grade with tonnage less than in March and only one-third of the tonnage exported in April of 1938, according to figures released by the Bureau of Foreign and Domestic Commerce.

Pulp exports in April totaled 5,036 short tons, air dry weight, valued at $208,317, compared with 5,674 short tons valued at $266,671 in March of this year, and 15,927 short tons valued at $1,068,578 in April, 1938.

Preliminary figures released yesterday by U. S. Department of Commerce and subject to revision showed that April exports reached 5,036 short tons, air dry weight, valued at $208,317, comparing with 5,674 tons of a declared value of $266,671 in March this year, and 15,927 short tons valued at $1,068,578 in April, 1938.

The April last exports comprised 702 tons of rayon and special chemical grades valued at $51,430; 1,222 tons of other bleached sulphite valued at $51,135; 2,085 tons of unbleached sulphite valued at $61,821; 288 tons of soda pulp of a value of $13,174, and 739 tons of miscellaneous pulp valued at $30,757. One reason for the small April shipments was the continued lack of exports to Japan, only 12 tons being exported to that country for the month.

Bruce Brown, Jr., Enters Fibreboard Technical Dept.

● Bruce F. Brown, Jr., on completing his course in the School of Business Administration at Stanford University this June will enter the technical department of the Fibreboard Products, Inc., Vernon Division, to become the third generation in his family to work for this firm. His father is general manager and his grandfather, Peter C. Brown was the founder of the company. Bruce, Jr., received his bachelor degree in chemistry from Stanford in 1937.

Vernon Gets Golf Tournament Started

● Office and Sales Departments of the Fibreboard Products, Inc., Vernon Division, planned to hold their fourth annual golf tourney June 17 at the San Gabriel Country Club. In charge of the affair were Murray Brown, Grant Farmer and Ma MacWilliams. Prizes were donated by supply houses among them Shuler and Benninghofen and the Albany Felt Company.

American Viscose Building New Staple Fiber Plant

● Construction recently began on five new buildings for the American Viscose Company at Nitro, West Virginia. This program represents an enlargement of the staple fiber plant costing $5,000,000, construction of which was started last September. It will be completed within the next few months.

WE HAD A CHANCE TO BE **WRONG**
5 DIFFERENT WAYS

HERE'S the story of a tricky lubrication job at A. P. W. Paper Company's Albany plant.

"Pick your own problem," said A. P. W.'s Purchasing Agent, when a Shell engineer asked him for a chance to *prove* Shell Lubricants.

A. P. W.'s Chief Engineer agreed that when the Shell man picked wet-end Foudrinier roll journals, he took on a five-fold lubrication problem.

Problem No. 1 was that if a table roll bearing seizes, the screen wears a flat spot on the face of the roll.

Secondly, the screen wears itself out, and those screens cost important money.

In the third place, moisture tends to contaminate the oil in the bearings.

Fourthly, it is important to keep the machines going. It costs time and money to stop them and make repairs.

The fifth problem was that excess oil can easily spoil the stock.

The Shell engineer applied the correct grade of Shell Carnea Oil to these bearings.

And to put a big story in one short, sweet phrase—"Complete satisfaction on all five points" is the pleasant report A. P. W.'s Chief Engineer gives us.

SHELL

There are Shell representatives, engineers and technical men available to all commercial concerns who have fuel and lubrication problems. Their service is yours at any time for the asking.

SHELL INDUSTRIAL LUBRICANTS

Weyerhaeuser at Longview Personal News

● R. B. Wolf, general manager of the pulp division, Weyerhaeuser Timber Co., returned to Longview about the first of June, after a trip of a month or so in the East. He planned to remain at the Longview mill most of the month of June.

W. Norman Kelly, manager of the Longview mill, journeyed to Vancouver, B. C., early this month to welcome the King and Queen of Great Britain. Mr. Kelly was born on the Isle of Man, later coming to Canada, and then to the United States.

Ed Wood of the technical control department has finally completed the flagstone patio at his Longview home. He and Herb Peterson, mill instrument man, recently bought adjoining ranches of 20 acres each near Rainier, Ore., six miles from the mill, and on top of the hill overlooking the Columbia river. The new ranchers plan to improve their property as they go along, and expect to build summer homes soon.

Harold Hauff of the research department had his appendix removed just before the first of June, but was back on the job about June 5th, after ten days in the hospital.

Vern Mauerman of the engineering department was married the last of May. The Weyerhaeuser office force gave him a party prior to the event. Mr. and Mrs. Mauerman are now living in the Sunset Apartments in Longview.

D. K. MacBain, resident engineer, has been doing nothing of news value except weeding in his garden, which he says is not news since it is a continuous process.

Howard Moved To West Linn

● Ed Howard of the Port Angeles office of the Washington Pulp & Paper Corporation has been transferred to the office of the West Linn division of the Crown Zellerbach Corporation.

Another Paper Milk Bottle Machine

● The Arden Farms Dairy Company, Los Angeles, recently installed an Ex-Cell-O paper milk bottle filling machine, with a capacity of 15,000 units per day.

McKenzie Optimistic About Orient Market Revival

● Reports from H. J. McKenzie, manager of Export Sales Company, Vancouver, distributor of pulp and newsprint in the Orient for Powell River Company and Pacific Mills, Ltd., major British Columbia producers, have been more optimistic since he went to the Far East this spring.

Mr. McKenzie states that conditions are gradually approaching a more normal condition, although it is difficult to forecast when the improvement will reach a point where it will have appreciable influence on trans-Pacific trade.

The mere fact of Mr. McKenzie's trip to the Orient only a few months after he returned from an extensive business survey tour of Japan and China indicates his confidence in the ultimate revival of that market.

Harry Pym, of the same organization, is now in London in the course of a world tour of markets in the interests of the British Columbia pulp and paper industry. He will probably be back at his desk in Vancouver by the end of June.

Crown Men Attend P. A. Gathering

● Carl Gaiser, Crown Zellerbach purchasing agent at Portland, together with T. W. Bourns of Pacific Mills, Ltd., and J. D. Sullivan, Crown Zellerbach purchasing agent at Seattle, attended the convention of the National Association of Purchasing Agents at San Francisco the latter part of May.

After the national convention was ended, all of the Crown Zellerbach resident purchasing agents held a conference in San Francisco, before returning home.

Parkinson Transferred To San Francisco

● Myron Parkinson, employed in the personnel department of the Crown Zellerbach Corporation in Portland, has been transferred to San Francisco where he will have similar work under A. R. Heron.

Gigler Takes Vacation

● Jake Gigler, supervisor of the napkin division, Crown Willamette Paper Co., Camas, was away from the mill part of June while on vacation.

Bagley & Sewall Ownership In New Hands

● The control of The Bagley and Sewall Company, paper machinery manufacturers of Watertown, New York, changed hands on May 25th when an option to purchase the 30,000 shares of capital stock was signed by Abe Cooper of Syracuse and Watertown.

Clarence E. Kinne, president of the company, said in a statement issued at the time that:

"Ample working capital is now available, as three large banks are supplying Mr. Cooper with funds. Besides the purchase of the stock, Mr. Cooper has agreed to pay off the obligations of the company and takes over all assets.

"The business will be continued. In addition to building new fourdrinier and cylinder paper-making machines, old machines will be rebuilt and sold. Mr. Cooper will continue to buy up old paper mills and will rebuild and sell the machinery.

"He announced there would be no change in the official personnel of the company. Clarence E. Kinne will remain as president and general manager, Carroll L. Thompson, treasurer; Harry C. Kinne, secretary and sales manager, and George M. Pennock, mechanical engineer. Mr. Cooper will take no offcial title, although he will be the directing force of the business of the concern.

"The Bagley and Sewall Company is one of the oldest industrial concerns in this section of the state. It was founded September 1, 1853, by the late George A. Bagley, Edmund Q. Sewall and George Goulding under the name Goulding, Bagley and Sewall. Mr. Goulding retired in 1861 and the company then became Bagley and Sewall. It was incorporated in 1882, and until the Cooper purchase the Bagley and Sewall families have owned it for 77 years and have controlled it for 86 years.

"The high standard of design and workmanship which has characterized Bagley and Sewall Company machines for many years will be continued and we hope our many customers will continue to favor us with their business."

The Bagley & Sewall Company is represented on the Pacific Coast by Robert T. Petrie of 3206 N. E. 42nd Avenue, Portland, Oregon. Mr. Petrie left Portland on June 11th for Watertown, New York, to be gone for several weeks.

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PAPERBOARD PRODUCTION BY ZONES 1938

Short Tons

Zone.	Liners	Corr. Material	Chip	Folding Boxboard	Set-Up Boxboard	Other	Total
New England	31,100	9,300	5,300	132,400	58,700	37,900	274,700
Middle Atlantic	382,100	123,100	70,300	329,200	318,600	229,000	1,452,300
Lake States	369,600	282,900	120,700	552,500	124,100	312,300	1,762,100
South	629,000	200,000	11,100	27,600	17,000	81,600	966,300
Western	135,900	58,100	46,600	105,800	23,500	63,700	433,600
Total	1,547,700	673,400	254,000	1,147,500	541,900	724,500	4,889,000

Source: National Paperboard Association. The western group includes all states west of the Mississippi River with the exception of Texas, which is included in the southern group.

Oregon Sanitary Authority Handicapped by Lack of Funds

● During the recent session of the legislative assembly in Oregon, no new laws affecting stream purification were promulgated. Last November the voters passed a bill covering this subject, following which the governor appointed a board known as the Sanitary Authority, to carry out its provisions.

This Sanitary Authority has met twice and has started the work in motion. However, due to the fact that the $41,000 appropriation asked was cut to $7,500 for the next biennium, no field work or additional employees will be possible for some time.

In the meantime, the state sanitary engineer, Carl E. Green, is carrying on the usual supervision of water supply, sewage disposal, pollution, etc. Mr. Green is secretary of the Sanitary Authority. Letters are being sent out to cities, industries, etc., which are troubled with water pollution, asking for their cooperation in submitting plans for sewage plants, etc., for approval before construction.

It has been announced that the program of the Sanitary Authority will be one of cooperation and education, rather than one of adopting drastic measures.

Camas Horseshoe Club Holds Annual Meeting

● The Crown Willamette Horseshore Club of Camas held its annual gathering June 2 at the Dead Lake picnic grounds, with about 40 foremen and executives present from Camas, West Linn and Portland.

They held a horseshoe tournament, which was won by H. W. Duval, played softball, etc., and had a picnic dinner.

J. E. Hanny was master of ceremonies, and with the assistance of numerous willing helpers, put six new candidates through their degrees. Those put through their paces were Ed Stamm, Martin Mammen and Otto Hartwig of the Portland office, Jack Savage, Jake Gigler and Lyall Burnett of Camas.

Vic Gault was in charge of arrangements for the affair.

Mispley Visits Institute

● Robert Mispley of the Crown Zellerbach central technical department, Camas, Wash., recently spent ten days at the Institute of Paper Chemistry, Appleton, Wisc., in connection with their research activities.

May Newsprint Production Above 1938 Level

● Production in Canada during May, 1939, amounted to 250,015 tons and shipments to 274,635 tons, according to the News Print Service Bureau. Production in the United States was 85,872 tons and shipments 84,443 tons, making a total United States and Canadian newsprint production of 335,887 tons and shipments of 359,078 tons. During May, 22,298 tons of newsprint were made in Newfoundland, so that the total North American production for the month amounted to 358,185 tons. Total production in May, 1938, was 295,668 tons.

The Canadian mills produced 42,342 tons more in the first five months of 1939 than in the first five months of 1938, which was an increase of four per cent. The output in the United States was 62,754 tons or nineteen and one-tenth per cent more than in the first five months of 1938, in Newfoundland 3,514 tons or three and one-tenth per cent more, making a total increase of 108,610 tons, or seven and two-tenths per cent.

Stocks of newsprint paper at the end of May were 187,880 tons at Canadian mills and 21,494 tons at United States mills, making a combined total of 209,374 tons compared with 232,565 tons on April 30, 1939.

Aslin Vacations In California

● Keith Aslin, head of the order department at Portland for the Crown Zellerbach Corporation, left June 3 for two weeks of vacationing in California.

Hold First Chemical Engineering Conference

● The first Pacific Northwest Chemical Engineering Convention was held May 12th and 13th at the University of Washington in Seattle with around one hundred students and faculty members in attendance from the Universities of Montana, Idaho, British Columbia and Washington and Oregon State College and Washington State College in attendance.

Nine papers were presented covering a variety of subjects. The two-day meeting closed with a banquet on Saturday evening with A. H. Hooker, Jr., of the Hooker Electrochemical Company, Tacoma, as the principal speaker. Mr. Hooker talked on "Chemical Engineering Opportunities in the Pacific Northwest."

The 1940 convention will be held at Corvallis, Oregon, under the auspices of the Department of Chemical Engineering, Oregon State College.

Hanny's Visiting In Honolulu

● J. E. Hanny, resident manager for the Crown Willamette Paper Co., Division of Crown Zellerbach Corp., at Camas, sailed from San Francisco with his wife and daughter on June 15, en route to Honolulu. They will return in several weeks, after a short stay in the islands.

Link-Belt Issues a New Catalog

● Link-Belt Company, Chicago, announces the completion of its new 1278-page general catalog No. 800, the largest and most comprehensive catalog it has ever issued, containing list prices, dimensions, weights, and engineering data on power transmission machinery, and on equipment for handling, screening, drying, cooling, preparing materials mechanically. A 44-page pictorial section in the forepart of the book is devoted to giving the recipient a bird's-eye view of the many products that the company makes.

New in this book are:

A more complete line of Link-Belt Shafer self-aligning anti-friction bearing units.

Unmounted radial-thrust roller bearings providing for 3 degrees total misalignment.

A complete line of Twin Disc friction clutches.

A line of welded steel base plates providing a simple, convenient way of adjusting bearings for shaft alignment.

Universal Carrier chain capable of operating in two planes in one conveyor unit.

A line of finished-steel roller conveying chain, with a large range of conveyor attachments.

A new inexpensive Type "90" ball-bearing anti-friction belt conveyor idler.

Two new electric car spotters.

Never has a Link-Belt general catalog contained such a comprehensive line of power transmission equipment and the various forms of positive drives, according to the company's announcement. This section comprises 417 pages. There are 376 pages on chains and sprocket wheels; 343 pages on the various types of elevating and conveying equipment. Then come pages on screening, washing-drying machinery; power shovels; car spotters; ice crusher-slingers; automatic coal stokers; and 29 pages of useful engineering tables and data in convenient form for handy reference.

Requests for this new book must be made on business letterhead and addressed to Link-Belt Company direct.

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PACIFIC COAST EXPORTS
Converted Products
1938
By Customs Districts

Customs District.	Toilet Paper		Paper Towels and Napkins		File Folders, Index Cards, Office Forms, Etc.		Paper Bags		Boxes & Cartons		Envelopes		Cash Register and Adding Machine Paper	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Washington	208,375	$16,838	80,868	$6,549	25,315	$ 9,411	1,184,963	$82,815	415,110	$19,479	7,351	$2,001	35,865	$2,611
Oregon	51,604	3,914	119,125	6,217	.....	.....	968,896	64,011	.....	.....	.....	.....	255	25
San Francisco	120,088	9,580	76,512	9,373	17,527	$9,107	143,936	11,497	2,117,701	65,499	18,170	7,767	29,023	2.656
Los Angeles	415,110	31,973	36,500	2,471	.....	.....	266,306	16,206	.....	.....	.....	.....	.....	.....
Total	795,177	$62,305	313,005	$24,610	42,842	$18,518	2,564,101	$174,529	2,162,811	$84,978	25,521	$9,768	65,143	$5,292

Trade Talk

of Those Who Sell Paper in the Western States

Hopkinson Heads Commercial Paper Sales

● Marcus Alter, president, Commercial Paper Co., well known San Francisco paper jobbing house, has announced that N. D. Hopkinson had been appointed general manager of the company, effective June 1.

Hopkinson has been identified for a number of years with the paper industry in San Francisco. He has held various positions with the Zellerbach Paper Co., Bonestell & Co., and up to the first of this month had been sales manager of the San Francisco division of Carter, Rice & Co.

"Mr. Hopkinson has a large following here on the Coast," said Alter, "and he is well versed in the paper trade, as well as having a knowledge of the handling of personnel."

Alter also announced that the company had taken on the agency for the APW line of towels, toilet paper, and seat covers. The company is also occupying additional space for the storage of the new line.

Ward Now in Southern California

● F. R. Ward, formerly in charge of the Powell River Sales Company, Limited, office in Seattle, was recently transferred to Southern California as service representative of the company. He was succeeded in the Seattle office on Pier 10 by Anson Brooks.

Mr. Ward is living at 1451 Winchester Avenue, Glendale, California.

N. D. HOPKINSON, General Manager Commercial Paper Co.

Lou Murray Resigns As Everett Sales Manager

● J. L. "Lou" Murray, for the past 11 years with the Everett Pulp & Paper Co., as sales promotion manager, and sales manager, with headquarters in San Francisco, resigned his position early this month.

Previous to his connection with Everett, Murray was with the Mutual Paper Company, Seattle, prior to its becoming a division of Blake, Moffitt & Towne.

"My plans for the future are quite indefinite," said Murray. "I do know, however, that I'm going up to my summer home at the mouth of the Columbia River and take a good long vacation, getting in some licks on the golf links, and also with the fishing rod."

No successor has yet been named by the Everett Pulp & Paper Co. for Murray's position.

Oregon Pulp Moves San Francisco Offices

● New San Francisco offices for the Oregon Pulp & Paper Co., Columbia River Paper Mills, and California-Oregon Paper Mills, division of Columbia River Paper Mills, were established on June 5 at Room 854 Russ Bldg. The telephone in the new quarters is EXbrook 6518, and Teletypewriter number is S. F. 525.

Louis Colton's Daughter Married

● Wedding bells rang out May 8 for Miss Marian Colton, charming and only daughter of Louis A. Colton, vice-president and purchasing department manager, Zellerbach Paper Co., San Francisco.

Miss Colton was wed to Willard S. Levy, and the young couple will make their home in the Bay City, where the groom is in business.

Death Takes Henry Fischer of Comfort Paper

● The many friends of Henry M. Fischer, general manager, Comfort Paper Company, with headquarters in San Francisco, were grieved to hear of his death in Washington, D. C., April 24.

Fischer, 60, was found unconscious by his wife, Blanche, in their room at the Mayflower Hotel. He died before the house physician she called could reach him.

Mrs. Fischer, who had been visiting in the East, had been joined by her husband only about a week ago. Also surviving are four daughters, Mrs. Ned Parlett, San Mateo; Mrs. Virginia Clapp, San Diego; Mrs. D. W. Edwards, Atchinson, Ga.; and Mrs. Harriet Webb, Winterhaven, Fla.

West Coast Paper Products Moves Into Larger Plant

● The West Coast Paper Products Co. of Portland, manufacturers of paper milk bottle tops exclusively, moved into new quarters June 15 at 2631 N. E. Union Ave. The factory previously was located at 5709 N. E. Union.

This company has been engaged in this business for 11 years, and under the leadership of President T. J. Van Alstyne, the business has grown to such an extent that it was necessary to purchase the larger building.

About eight times the previous space will now be available. The company plans the installation of two more presses for bottle caps, which will increase production of the plant by 25 to 30 per cent.

The market of the concern covers a wide area, including Oregon, Washington, California, Idaho, Montana, Nevada, Honolulu and Puerto Rico.

Rominger Heads Carter, Rice Sales

● H. H. Rominger, for a number of years in charge of the twine and cordage department sales of the Carter, Rice & Co., San Francisco division, has been appointed sales manager of the division, according to a recent announcement by C. H. Beckwith, Pacific Coast manager of the company.

Rominger takes the place of N. D. Hopkinson, who resigned June 1 to become general manager of the Commercial Paper Co., San Francisco.

H. H. ROMINGER, Sales Manager Carter, Rice in San Francisco

Recent Visitors to Coast Paper Trade

● Recent visitors to San Francisco and other Coast points have been: Louis Marshall, paper merchant, Appleton, Wis.; E. E. Colvin, Appleton Coated Paper Co., Appleton, Wis.; A. C. Remley, sales manager, Nekoosa Edwards Paper Co., Nekoosa, Wis.; Samuel C. Knode, vice-president, Albermarle Paper Mfg. Co., Richmond, Va.; Robert Allison, general manager, United States Envelope Co., Springfield, Mass.; Robert Crump, Standard Paper Mfg. Co., Richmond, Va.; Wm. R. Lenderking, general manager, Lily Tulip Corp., New York City; Harrison R. Baldwin, vice-president, Hammermill Paper Co., Erie, Pa.; Don Leslie, assistant to the president, Hammermill Paper Co., Erie, Pa.; Morris Park, Marvellum Co., Holyoke, Mass.

W. W. Langtry, vice-president, District of Columbia Paper Mills, Washington, D. C.; Frederick McNicoll, Racquette River Paper Co., Potsdam, N. Y.; W. F. Goldbeck, Chicago office, Hollingsworth & Whitney Co.; Victor Savlee, sales manager, Geo. LaMonte & Sons, Nutley, N. J.; Tom Donohue, Regal Fibre Corp., New York City; E. L. McCusker, Rayborn Mfg. Co., Philadelphia, Pa.; M. B. Lowe, Lowe Paper Co., Ridgefield, N. J.; Morris Doborow, secretary, Writing Paper Manufacturers Association, New York City; and Henry F. Obermanns, vice-president in charge of production, Hammermill Paper Co., Erie, Pa.

Envelope Men Meet at Del Monte

● A really vital and brass tacks convention was held at Del Monte, May 12-13 by the Pacific Coast Group, Envelope Manufacturers Association of America.

Alan Field, Field-Ernst Envelope Co., San Francisco, was elected president; and Geo. Bennett, National Envelope Corp., San Francisco, secretary. About 12 Coast envelope manufacturing concerns were represented.

At a series of roundtable forum discussions trade practices, and the general condition of the industry was gone over. Members read papers such as "Plan Your Work With Your Plan In Selling," by W. R. Lake, Mailwell Envelope Co., Portland; "Selling Preferred Stock," by Geo. Bennett; "Selling Better Printing," by Alex Kensey, Coast Envelope & Leather Products Co., Los Angeles; "Competitive Relationships," Bert Clifford, Envelope Corp., San Francisco; "Salesmen's Compensation," by G. W. Milne, Northwest Envelope Manufacturing Co., Seattle; and "What Our Association Means To Me," by Alan Field.

A dramatic sales presentation was made by Richard Gledhill, Field-Ernst Co.

Akers Visit Alaska

● A. W. "Jack" Akers, manager of the Seattle division of the Zellerbach Paper Company, was among the Seattle business men making the annual good will tour to Alaska which is sponsored by the Seattle Chamber of Commerce. The trip, which includes all important Coastal points in Alaska started from Seattle late in May.

Hentschel Heads Paper Mill Men's Club

● At the helm of the Paper Mill Men's Club of Southern California during the ensuing year will be Al C. Hentschel, who went to his new post from the vice presidency. Al is fifth to serve in this capacity. The roster of former presidents carries the names of Frank R. Philbrook, Edward N. Smith, Neil B. Sinclair and Geo. Wieman. Dewey Megel although elected to the office was unable to serve.

C. Francis Jenkins moved from the secretariat to the vice presidency. Charles Spies, treasurer last term, is secretary, and Lester E. Remmers, new member of the staff of officers, was elected treasurer. The officers were elected April 20 at a noon day luncheon meeting.

First event under the new administration was held June 2 at the California Country Club, a golf and dinner meeting. Inasmuch as this was the initial meeting under the new officers considerable time was devoted to business matters.

During the afternoon twelve followers of the Fairway took to the field and Charles Spies came out ahead with the blind bogey to his credit, shooting a 72 low net. Newby Green and Geo. Wieman tied for second low net. Other golfers were Frank N. Gladden, Al C. Hentschel, H. L. Fields, R. F. Attridge, C. W. Fisher, W. A. McBride, Ervin Damon, Ansel A. Ernst and S. A. Carter.

After dinner Charles Spies reported on the results of a questionaire which had been circulated by mail to the membership to obtain the opinion of the group on conduct of meetings. Discussion of the report followed and the concensus of questionaire and discussion was to schedule meetings for evenings instead of noon time with the reservation that on special occasions noon meetings may be called; to arrange programs for the future to include speakers or other features of entertainment; and to hold meetings at least every other month with monthly meetings to be held when feasible.

C. Fran Jenkins reported on the new golf trophy which the officers are putting up. It will be a permanent trophy to be awarded finally to the member contestant who takes low net score in three different matches. The winner of each contest will have his name engraved on the trophy. A Calcutta will also be held at each golf tourney for low net, low gross and blind bogey prizes.

A meeting is planned tentatively for July to launch the first plans for the big fall meeting, the annual Sports Carnival and Hi-Jinks.

Death Takes W. Burns Collins

● W. Burns (Bill) Collins, for sixteen years a prominent paper mill representative in Southern California, died in Los Angeles on June 3rd.

Leaving a wholesale paper business in Pittsburgh, Pa., in 1921, Mr. Collins moved to Los Angeles as representative for the Northern Paper Mills of Green Bay, Wisconsin, and remained with them until two years ago when he left the paper business.

Mr. Collins was among the originators of the idea of the Paper Mill Men's Club of Southern California.

Surviving him are Mrs. Collins, a daughter and a son.

Western Newspaper Union To Handle Paper

D. D. DeHaven, San Francisco manager, Western Newspaper Union, has announced to the trade that the company will henceforth carry a complete line of paper, as well as pritner's supplies and equipment.

In charge of the paper department will be E. M. South, who has been connected with the company for 18 years, and who has had considerable experience in the paper trade.

Western Newspaper Union will represent Chemical Paper Mfg. Co.; Crocker McElwain Co.; Bergstrom Paper Co.; Champion Coated Paper Co.; and the Leader Cardboard Co.

Coughlin Named General Manager of Comfort Paper

● Roger J. Coughlin, for the past five years, sales manager, Comfort Paper Co., San Francisco, has been appointed general manager of the company, succeeding Henry Fischer, who died recently in Washington, D. C.

Coughlin has been with the Comfort Paper Co. since its inception nine years ago. For four years he was in the Seattle office of the company, later being transferred to San Francisco.

Taking Coughlin's place as sales manager is Grayson D. Wheeler, formerly district representative, Seattle.

The company distributes Zee and Comfort toilet tissues, Zee paper napkins and other paper specialties.

Recently it introduced, with a great deal of success a new embossed Comfort bleached toilet tissue, which has much the appearance of cloth. Another merchandising idea is the Four Roll Family Pack, with four rolls of toilet tissue bound together in an attractive paper wrapper, which will sell as a unit.

The Comfort Paper Co. is backing its products with an aggressive campaign of consumer advertising, which bids fair to aid in setting some sales records.

ROGER J. COUGHLIN, General Manager Comfort Paper Co.

Second Paper Trade Conference Meets at Del Monte

THE second annual meeting of the Pacific Coast Paper Conference, held at Del Monte, May 11, 12, and 13, was worthwhile, according to the concensus of attending paper men.

J. W. Thompson, division manager, Blake, Moffitt & Towne, Seattle, was chairman of the series of informal round table talks at the meeting.

W. B. Reynolds, Los Angeles, secretary, Printing Paper Conference of Southern California and secretary, Paper Trade Conference of Southern California, was secretary of the conference.

The May 11th session which was limited to paper merchants only was devoted to a discussion of a number of topics such as: "Salesmen's Training Course," "Report on February National Paper Trade Association Meeting," "Report on Merchandising Ideas and Exhibits Meeting," "Standardization," "Control of Returned Goods," "Function of Local Associations," "Presentation of National Paper Trade Association Charts and Statistics," "Review of Unprofitable Business of 1938," "Delivery Costs," and "Traffic Problems."

That night, Albert C. Agnew, newly appointed counsel for the Paper Trade Conference, San Francisco, spoke on "Self-Government in Business."

Said Agnew: "I am firmly of the opinion that what ever we may think about the hand which government is taking in business, any material change must come from the side of business and not that of government. In other words, business must regulate itself if it is not to be regulated by government.

"I suggest for your thoughtful consideration the following. **First:** It will not do for you to say that the first move is up to the government. The initiative toward increase of production and consequent increase in employment must come from business. Once the step is taken and the log jam broken, the force of public opinion, already aroused on this subject, will prevent unwarranted attack upon business.

"Second: Much present unemployment arises from lack of working capital facilities, particularly in the case of small concerns. Such concerns have not made adequate use of the credit facilities which the government has supplied. I refer to the RFC and the Federal Reserve Banks, where working capital loans may be had on reasonable security. **Three million small concerns, employing two extra men each would solve the unemployment problem.**

"Third: In some cases decrease in working force has been occasioned by a desire to cut down operating costs in order to continue the payment of dividends to capital. A restoration of buying power through the re-employment of labor and the consequent creation of a healthy national outlook will do more in the long run to keep business operating in the black than any temporary curtailment of operating costs.

"Fourth: The continuance of the existence of our 'army of the unemployed' can, and will do more injury, directly and indirectly, to legitimate business than could possibly result from the assumption of whatever risk is entailed in over-production through the absorption of idle man power."

Following Agnew's talk, W. J. Gray, Pacific Coast manager, Paterson Pacific Parchment Co., San Francisco, acted as master of ceremonies in conducting the Calcutta Pool in connection with the golf tournament.

Friday morning, merchants and manufacturers gathered together for another series of round table discussions on: "Tax Matters," "Reducing Operating Costs," and "Labor Relations."

Necrology

Frank C. Stratford, manager, San Francisco Division, Zellerbach Paper Co., and chairman of the necrology committee, paid tribute to the following paper men deceased since May, 1938; John Leslie, Minneapolis, early president, National Paper Trade Association; Emmett Hay Naylor, New York, for 24 years executive secretary of the writing and cover paper manufacturers association; M. A. Wertheimer, chairman of the board, Longview Fibre Co.; Roy A. Swain, Pacific Coast representative, L. L. Brown Paper Co., Monrovia; Charles F. Schaub, president, Pacific Straw Board & Paper Co., Longview; Jack Williams, president, Crystal Paper Service Co., Los Angeles; Arthur W. Blackman, D. F. Monroe Co., Boston; Tom Waller, Keyes Fibre Co., San Francisco; Robert E. Rudd, president, Rochester Paper Co., Rochester, Mich.; Henry Fisher, Comfort Paper Co., San Francisco; Roger B. Taft, New York, district sales manager, Hammermill Paper Co.; C. Carruthers, general superintendent, Powell River Co., Powell River, B. C.; Alan Chandler, Alling & Cory Co., Pittsburgh, Pa.; Dr. C. H. Herty, Savannah, Ga.; T. M. Dennison, Blake, Moffitt & Towne, Los Angeles.

Breyman to Head 1940 Meeting

E. A. Breyman, vice-president, Zellerbach Paper Co., San Francisco, was chosen chairman of the 1940 Conference. Edward L. O'Neil, secretary of the Paper Trade Conference, San Francisco, was chosen as secretary of next year's meeting, and Del Monte was again chosen as the meeting place, with the dates to be announced later.

Golf Winners

The Golf Committee, composed of G. J. Ticoulat, sales manager, Crown-Willamette Paper Co., San Francisco, chairman; M. M. Baruh, Crown-Zellerbach Corp., San Francisco; Andrew Christ, Jr., Western Waxed Paper Co., Oakland; W. J. Gray, Paterson-Pacific Parchment Co., San Francisco; and C. Francis Jenkins, functioned perfectly and the big tournament was run off without a hitch.

Winner of the championship and the prize donated by the paper manufacturers and converters was William Taverner, Taverner & Fricke, Los Angeles.

CLASS A—Winner, G. J. Ticoulat, who repeated his performance of last year—donor, Everett Pulp & Paper Co. Runner-up, Thomas McLaren, Crown-Zellerbach Corp., San Francisco—donor, Graham Paper Co.

CLASS B—Winner, Paul May, Pomona Paper Products Co., Pomona—donor, Western Waxed Paper Co. Runner-up, Gary Cann, Cann & Co., Los Angeles—donor, Crown-Willamette Paper Co.

BEST NET FOR 18 HOLES—Winner, Frank Jeffries, Tacoma Paper & Stationery Co.—donor, Longview Fibre Co. Runner-up, M. J. Boradorix—donor, Geo. LaMonte & Son.

APPROACH AND PUTTING CONTEST—Winner, Frank Philbrook, Graham Paper Co.—donor, Inland Empire Paper Co., Los Angeles. Runner-up, Andrew Christ, Western Waxed Paper Co.—donor, Kimberly-Clark Corp.

PUTTING CONTEST—Was a four way tie between W. D. McWaters, division manager, Zellerbach Paper Co., Portland; V. Savalle, Geo. LaMonte & Sons, Nutley, N. J.; W. J. Gray, Paterson Pacific Parchment Co., San Francisco; and Harry Goedje, Crown Willamette Paper Co., San Francisco. In the ensuing shake-off, Goedje won first prize donated by the Dobeckmun Co., and Savalle won runner-up prize donated by the Menasha Products Co.

BLIND BOGEY—Winner, L. M. Simpson, Pioneer Division, Flintkote Co., Los Angeles—donor, Pacific Coast Envelope Co. Runner-up, A. C. Agnew, counsel, Paper Trade Conference, San Francisco—donor,Neenah Paper Co.

Ladies' Tournament

CHAMPIONSHIP — Winner, Mrs. R. Christ—donor, The Paterson Parchment Paper Co. Runner-up, Mrs. E. A. Breyman—donor, Grays Harbor Corp.

BEST NET FOR NINE HOLES—Winner, Mrs. R. A. McDonald—donor, Hawley Pulp & Paper Co. Runner-up, Mrs. Tom McLaren—donor, Southern Kraft Corp.

PUTTING CONTEST—Winner, Mrs. R. A. McDonald — donor, Glassine Bag Mfgrs. of the Pacific Coast. Runner-up, Mrs. Frank Youngman—donor, Union Bag & Paper Corp.

MIXED TWO BALL FOURSOME—Winner, Mrs. Claire Saroni and W. E. Taverner—donor, Columbia River Paper Mills and subsidiaries. Runner-up, Mrs. Harold Zellerbach and R. A. McDonald—donor, Fibreboard Products Inc.

BLIND BOGEY—Mrs. Andrew Christ—donor, the Adhesive Products Co. Runner-up, Mrs. E. A. Breyman.

Winner of a special prize donated by the California Cotton Mills Co., and drawn at the cocktail party Saturday evening, was Mrs. R. A. Gates.

Seventy paper or paper products manufacturers were represented at the Conference and 28 Pacific Coast paper distributors were there.

Among Eastern manufacturers attending were: Geo. P. Lee, Eastern Mfg. Co., New York; Harrison R. Baldwin and D. S. Leslie, Hammermill Paper Co., Erie, Pa.; V. N. Savalle, Geo. LaMonte & Sons, Nutley, N. J.; Maurice A. Park, Marvellum Co., Holyoke, Mass.; and Robert L. Allison, United States Envelope Co., Springfield, Mass.

Snapshots at Del Monte

In the snapshots taken at the Second Annual Paper Trade Conference held in Del Monte, California, May 11, 12, 13th, appear the following paper men:

In No. 1 — J. W. THOMPSON, Manager, Blake Moffitt & Towne, Seattle, Chairman of the 1939 Pacific Coast Paper Conference. No. 2 — W. B. REYNOLDS, Secretary of the 1939 Pacific Coast Paper Conference at Del Monte, Secretary, Printing Paper Conference of Southern California, and Secretary, Paper Trade Conference of Southern California, Los Angeles. No. 3 — J. W. GENUIT, Sales Manager, California Fruit Wrapping Mills, Pomona, California.

No. 4 — I. ZELLERBACH, Chairman of the Board, Crown Zellerbach Corporation, San Francisco. No. 5 — ALBERT C. AGNEW, Counsel, Paper Trade Conference, San Francisco — Principal speaker 1939 Pacific Coast Paper Conference. No. 6 — G. J. TICOULAT, Sales Manager, Crown Willamette Paper Co., San Francisco. W. J. GRAY, Pacific Coast Manager, Paterson Parchment Paper Co., San Francisco.

No. 7 — EDWARD L. O'NEIL, elected secretary of Pacific Coast Paper Conference 1940 and secretary of the Paper Trade Conference, San Francisco. No. 8 — Left to Right: L. M. SIMPSON, Vice President and General Manager, Pioneer Flintkote Co., Los Angeles. WALTER W. HUELAT, Manager, Blake, Moffitt & Towne, Los Angeles Division. No. 9 — Left to Right: EARL VAN POOL, San Francisco, Pacific Coast Manager of the Brown Co. ANDREW CHRIST, JR., Western Waxed Paper Co., Oakland; WM. (BILL) TAVERNER, Taverner & Fricke, Los Angeles, and G. J. TICOULAT, Crown Willamette Paper Co., San Francisco.

No. 10 — FRANK C. STRATFORD, San Francisco Division Manager, Zellerbach Paper Co. No. 11 — Left to Right: ALBERT C. AGNEW; F. E. JEFFRIES, Tacoma Paper & Stationery Co., Tacoma; J. W. THOMPSON, Manager, Blake, Moffitt & Towne, Seattle; V. N. SAVALE, Nutley, N. J., George La Monte & Son. Standing, C. L. SHORNO, Manager, Blake, Moffitt & Towne, Portland. No. 12 — Left to Right: PAUL R. MAY, Pomona Paper Products Co., Pomona. R. T. CLOSE, Smart & Final, Los Angeles.

No. 13 — Left to Right: M. C. DOBROW, Writing Paper Manufacturers Association, New York City; W. J. GARRITY, Munsing Paper Co., Chicago, and J. F. WUENSCHELL, Grays Harbor Pulp & Paper Co., Hoquiam, Wash. No. 14 — ARTHUR J. NELSON, Ingram Paper Co., Los Angeles; VICTOR E. HECHT, Vice President, Zellerbach Paper Co., San Francisco. No. 15 — J. S. FAIRCHILD, Pacific Coast Envelope Co.; R. L. ALLISON, U. S. Envelope Co.; J. L. (LOU) MURRAY and VICTOR E. HECHT. No. 16 — Left to Right: E. A. BREYMAN, Vice President, Zellerbach Paper Co., San Francisco; D. S. LESLIE, Vice President and Assistant General Manager, Hammermill Paper Co., Erie, Pa.; FRANK JEFFRIES, Tacoma Paper & Stationery Co., Tacoma, and C. L. SHORNO, Manager, Blake, Moffitt & Towne, Portland.

No. 17 — Left to Right: THOMAS McLAREN, Vice President and Treasurer of Crown Zellerbach Corp., San Francisco; GEORGE WIEMAN, Western Waxed Paper Co., Los Angeles; FRANK YOUNGMAN, Vice President, Crown Zellerbach Corp., Portland; R. A. McDONALD, Executive Vice President, Crown Zellerbach Corp., San Francisco.

No. 18 — Left to Right: FRANK C. STRATFORD, Manager, San Francisco Division, Zellerbach Paper Co.; G. J. TICOULAT, Sales Manager, Crown Willamette Paper Co., San Francisco, and ARTHUR W. TOWNE, Vice President and Manager, Blake, Moffitt & Towne, San Francisco.

In No. 1 — Left to Right: R. A. GATES, Everett Pulp & Paper Co.; D. D. MILLER, Pacific Coast Manager, West Virginia Pulp & Paper Co.; ROY J. DOUGAN, George La Monte & Sons, and FRANK C. STRATFORD, Zellerbach Paper Co., San Francisco. No. 2 — R. A. GATES, Everett Pulp & Paper Co., San Francisco. No. 3 — A. A. ERNEST, Everett Pulp & Paper Co., Los Angeles.

No. 4 — Left to Right: P. K. HOLLAND, Manager, Los Angeles Division, Zellerbach Paper Co.; W. D. McWATERS, Zellerbach Paper Co., Portland; PHIL G. JONES, Los Angeles, and HARRISON R. BALDWIN, Hammermill Paper Co., Erie, Pa. No. 5 — Left to Right: GEORGE P. LEE, Eastern Manufacturing Co., New York City; R. G. KELLY, General Paper Co., Los Angeles.

No. 6 — Left to Right: R. E. LEGRANT, Taverner & Fricke, Los Angeles; FRANK PHILBROOK, Graham Paper Co., Los Angeles, and CARL FRICKE, Taverner & Fricke, Los Angeles. No. 7 — Left to Right: M. A. PARK, Vice President, Marvellum Co., Holyoke, Mass.; A. H. COCHRAN, Mead Sales Co. and Marvellum Co., San Francisco.

Chambers Pacific Company Liquidates Stock

● The wholesale paper firm, Chambers Pacific Company, which was started a year ago by Walter Chambers, son of the former vice-president of the Sante Fe Railroad, was liquidated June 1st. Offices and warehouse of the firm were maintained at 4410 District Blvd., Vernon, Calif.

Miller Has a New Son

● A potential paper man arrived June 2 at the San Francisco home of D. D. Miller, Pacific Coast Manager, West Virginia Pulp & Paper Co.

The new comer has been named D. D., Jr., and he weighed in at eight pounds plus. He's the first child for the Millers.

Stevens Passing the Cigars

● Bob Stevens, Sacramento division, Zellerbach Paper Co., and Mrs. Stevens, are receiving congratulations on the arrival of a baby daughter recently.

Armitrage Has a Son

● Al Armitrage, West Virginia Pulp & Paper Co., San Francisco office, and Mrs. Armitrage, are receiving the congratulations of their friends on the arrival of a brand new baby boy.

Watson Exhibiting Testing Equipment

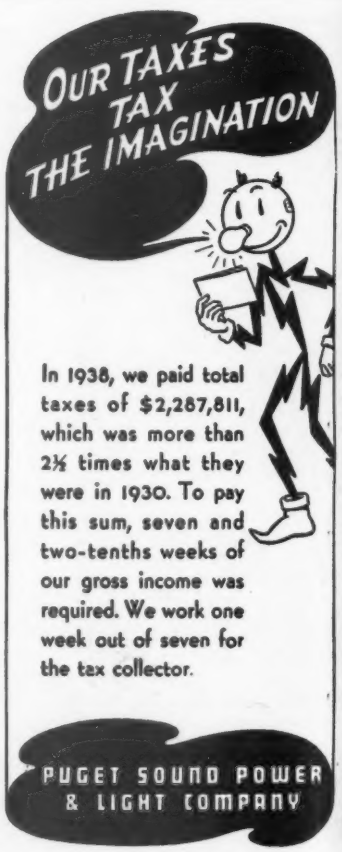
● R. T. Watson, advertising manager, Blake, Moffitt & Towne, San Francisco, took the company's laboratory instruments to Los Angeles last month to demonstrate to the lads in the sales department the various tests to be made on paper.

PULP BLEACHING COMPANY

ORANGE
NEW JERSEY

●

CELLULOSE PURIFICATION EQUIPMENT


OUR TAXES TAX THE IMAGINATION
In 1938, we paid total taxes of $2,287,811, which was more than 2½ times what they were in 1930. To pay this sum, seven and two-tenths weeks of our gross income was required. We work one week out of seven for the tax collector.
PUGET SOUND POWER & LIGHT COMPANY

Slash acid-making costs!

WITH A

Bingham

VERTICAL MOLTEN SULPHUR PUMP

"Man-handling" of sulphur is eliminated with a *Bingham* Molten Sulphur Pump. With this special steam jacketed pump, molten sulphur is delivered to the burner at a ***controlled rate of flow.***

The controlled production of SO_2 gas, made possible by the use of this pumping equipment greatly assists in the manufacture of a uniform sulphite cooking acid.

For uniform acid production at a lower cost—***Buy Bingham!***

Bingham turbine driven Molten Sulphur Pump

Bingham PUMP COMPANY

705 S. E. Main St., PORTLAND, OREGON

Meet the Men Who Sell Orr Felts

If you have a felt problem, here are the men to help you solve it.

Mr. Eilers, dean of the "force," has been contacting the mills, for many years. The same holds true of Messrs. Purdy, Scott, Hodges and Casparis. If these men have cooperated on one felt problem, they have cooperated on a thousand. Why not take advantage of their broad experience?

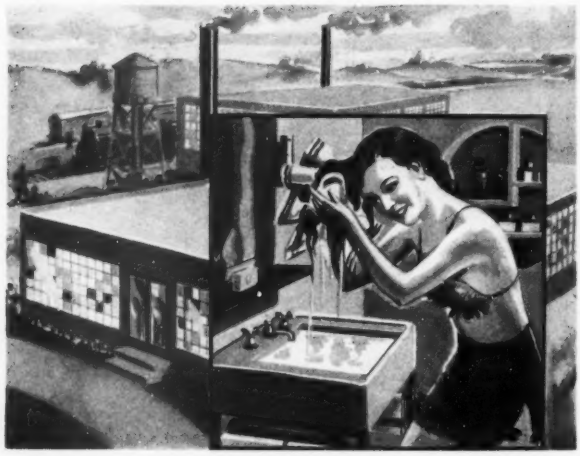
And remember this—the superior water removal qualities and longer wear of Orr Felts account for the Orr plant being the largest felt mill in the world.

THE ORR FELT AND BLANKET COMPANY

PIQUA, OHIO

Pacific Coast Representative: Walter S. Hodges, Pacific Bldg., Portland, Ore.

ORR FELTS



THE principle IS THE same...

A woman washing her hair, wringing out the rinse water through a towel and finally evaporating the remaining moisture with a mechanical hair drier parallels in miniature the operations of a paper machine.

Technologists estimated the cost of evaporating a ton of moisture at the driers at from ten to fifteen times the cost of removing the same weight of water through a suitable felt at the presses. The spread between the lower and the upper figures represents differences in . . . 1—*Efficiency at the couch and presses* . . . 2—*Crown and density of the rubber rolls* . . . 3—*Suitability of the felt for the purposes they are designed to serve.*

Every Hamilton Felt is "made to order" for the machine it is to serve and the paper it is to produce. Eighty years experience governs the selection and blending of the wools that enter into its manufacture. The pattern of the weave, the number and direction of threads per square inch, even the thickness of the nap — every minute detail contributes to the efficiency of a Hamilton Felt in presenting the driest possible sheet to the driers.

From the finest tissues to the heaviest board, there is a Hamilton Felt that does your work better, faster and at lower cost. One trial on your own machine will prove it.

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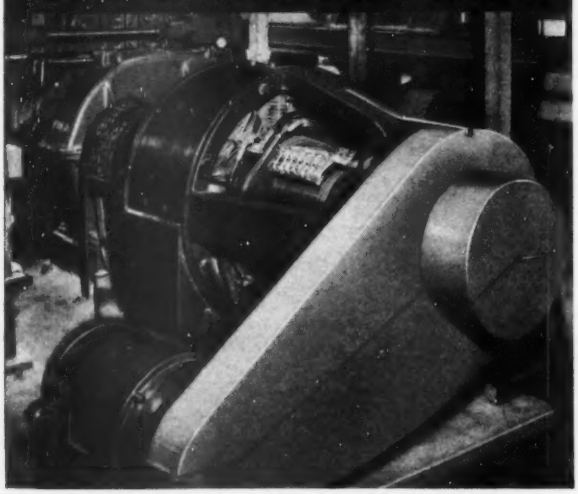

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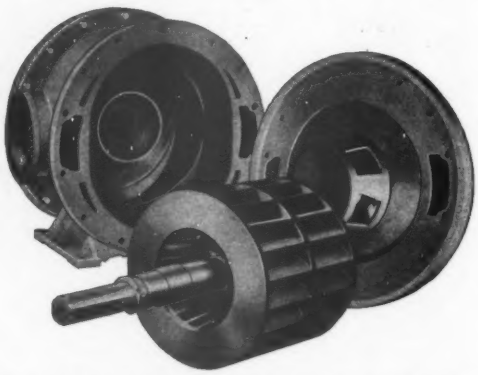

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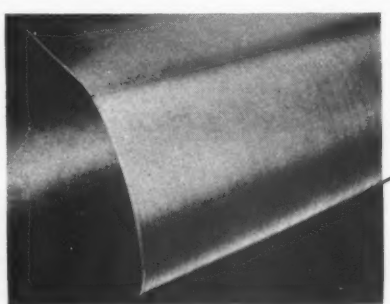

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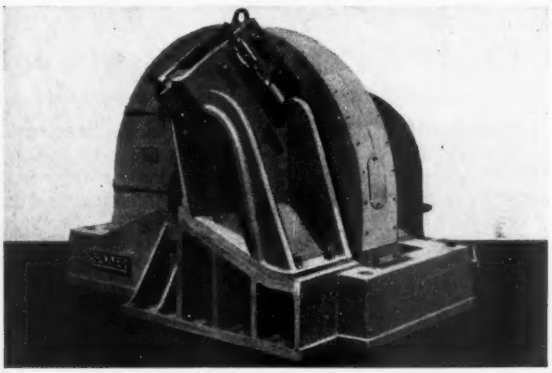

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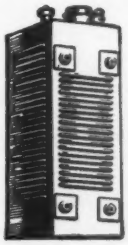

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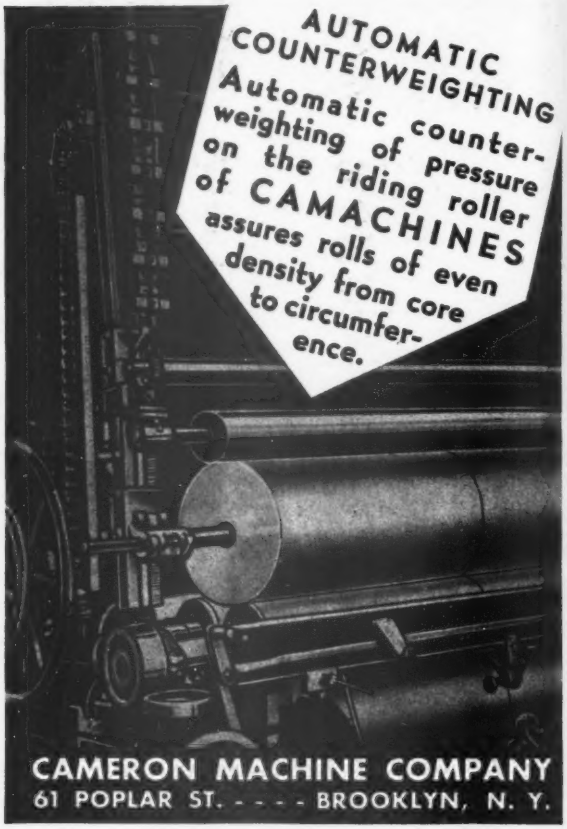
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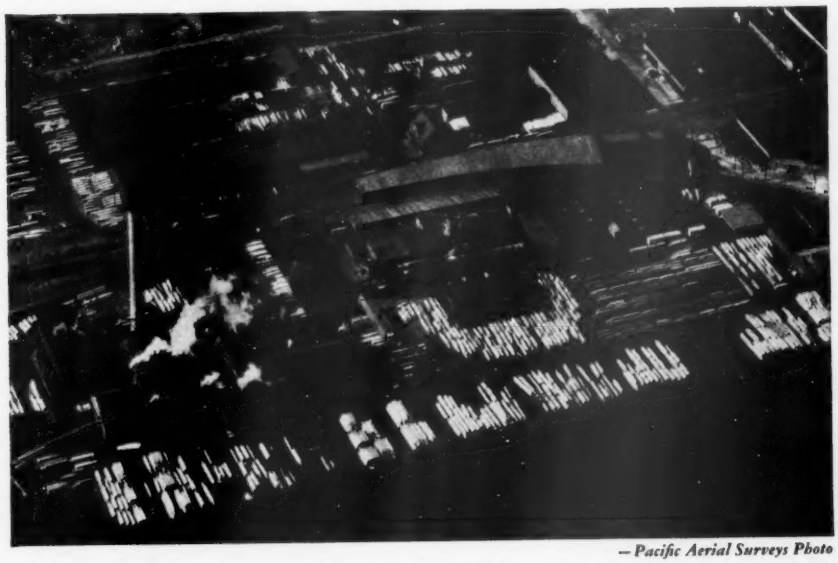

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